CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0098

WASTE DISCHARGE REQUIREMENTS
FOR
CONAGRA GROCERY PRODUCTS COMPANY
KEN VAN DYKE, MARCUS HANEY, JILL KAUFMAN-CONNOLLY
JOHN BRICHETTO, AND TONY AMARAL
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Board), finds that:

1. ConAgra Grocery Products Company (ConAgra) submitted a Report of Waste Discharge (RWD) dated 8 June 1999 and revised 30 April 2001 for expansion of its existing food processing waste discharge on properties owned by others. Additional information necessary to complete the RWD was submitted on 11 May, 13 June, 29 June, 25 July, 10 August, 12 September, 12 December, and 28 December 2001. Tentative WDRs were issued on 21 February 2002. ConAgra's comments on the tentative WDRs indicated that the Discharger's plans for phasing of the expansion and certain site improvements had changed. At staff's request, the Discharger submitted an addendum to the RWD on 22 April 2002.

2. ConAgra Grocery Products Company (the facility owner and operator) and Ken Van Dyke, Marcus Haney, Jill Kaufman-Connolly, John Brichetto, and Tony Amaral (the owners of the land application sites) are hereafter jointly known as the Discharger. ConAgra has executed a contract with each landowner, and has hired one or more of the landowners to control the actual application of wastewater to his/her property. The contracts are discussed further elsewhere in this Order.

3. ConAgra Grocery Products Company, the land managers, and the landowners are all jointly responsible for compliance with these Waste Discharge Requirements (WDRs).

4. The ConAgra vegetable processing facility is in Section 15, T10E, R2S, MDB&M, as shown on Attachments A and B, which are attached hereto and made part of the Order by reference. The processing facility is on Assessor's Parcel No. 063-024-009, at 554 South Yosemite Avenue in Oakdale.

5. The existing land application sites (the Northern Area) are in Sections 21, 22, 26, and 27, T10E, R2S, MDB&M, as shown on Attachment C, which is attached hereto and made part of the Order by reference. The existing land application sites comprise Assessor's Parcel Numbers 063-027-056 (Van Dyke), 063-028-017 (Haney), and 063-028-022 (Kaufman-Connolly).

6. The planned new land application areas (the Southern Area) are in Sections 27, 28, 33 and 34, T10E, R2S, MDB&M, as shown on Attachment D, which is attached hereto and made part of the Order by reference. The Southern Area land application sites comprise Assessor's Parcel Numbers 063-030-001 (Brichetto and partners); 063-028-003, -019, -020, -021, and -023 (Brichetto); and 062-029-055 (Amaral and partner).

7. Order No. 97-069 (NPDES No. CA 00832283), adopted by the Regional Board on 25 April 1997, prescribes requirements for a discharge of cannery process wastewater to the Northern Area only (a total of 450 acres of pasture land). Order No. 97-069 also allows surface water discharges of irrigation tailwater to the Cavill Drain and treated wastewater to the Oakdale Irrigation District (OID) Riverbank and Crane Laterals.

8. Since adoption of Order No. 97-069, the Discharger has violated the applicable effluent limitations on several occasions. On 1 June 2001, the Executive Officer issued Administrative Civil Liability Complaint No. 5-01-525 for twelve serious violations that occurred between 1 May 2000 and 31 October 2000. On 26 July 2001, the Discharger waived its right to a public hearing and paid the mandatory minimum penalty of $36,000.

9. Staff subsequently issued a Notice of Violation on 3 August 2001 for five serious violations of effluent limitations between November 2000 and June 2001. Another Notice of Violation was issued on 20 September 2001 for violations of effluent limitations detected by staff pursuant to an unannounced site inspection during which effluent samples were obtained for analysis and for violations of effluent limitations reported in the Discharger's self-monitoring reports for the months of July and August 2001.

10. In January 2001, the Discharger elected not to pursue renewal of the NPDES permit, which expired on 2 April 2002. The NPDES permit will be rescinded concurrent with adoption of this Order.

Existing Facility and Discharge

11. ConAgra Grocery Products Company's Oakdale processing facility processes tomatoes and beans year-round.

12. Surrounding land uses are primarily industrial and commercial at the processing facility, and agricultural and residential at the land application properties.

13. The processing facility utilizes boilers, water softeners, caustic cleaning agents, and disinfectants (sodium hypochlorite). Tomatoes are steam-peeled. Wastewaters associated with these processes are commingled with the food-processing waste streams.

14. An average of 4.4 million gallons per day (mgd) of wastewater is generated during the fresh-pack season (July through mid-October), with peak flows of 6.0 mgd. During the remanufacturing season (mid-October through June), average daily flows are approximately 0.9 mgd, and peak flows are about 2.0 mgd. These flows include wastewater from the bean processing line, which generates about 0.3 mgd of wastewater year-round.

15. Process wastewaters are screened to remove gross solids using rotary screens. During the fresh pack season, screened wastewater is discharged into both the Aerated Pond (at an average flow

rate of 1.7 mgd) and the Ranch Pond (at an average flow rate of 2.7 mgd) via a branched pipeline with a valve that controls the flow rate to the Aerated Pond. The Ranch Pond can overflow into the Aerated Pond through a pipeline in the berm. The top of the pipe is set at two feet below the crest of the berm, but flows into the Ranch Pond often exceed the combined capacity of the irrigation pumping system and the overflow pipe, resulting in freeboard of one foot or less in the Ranch Pond. It is therefore appropriate to require that the system be retrofitted to ensure that a minimum of two feet of freeboard is maintained at all times.

16. During the remanufacturing season, all process wastewater is discharged to the Aerated Pond for treatment, storage, and discharge to the land application areas as the weather permits. The Ranch Pond is typically drained for the rainy season.

17. The Aerated Pond is unlined and covers an area of approximately 10 acres. It is approximately 20 feet deep and has a capacity of 60 million gallons at two feet of freeboard. Effluent from the Aerated Pond is discharged to a settling pond prior to discharge to the land application areas. The settling pond is unlined.

18. Screened wastewater that discharges into the 6,400-square foot Ranch Pond during the fresh pack season receives no further treatment prior to discharge to the land application sites. The Ranch Pond is gunite-lined and has a capacity of approximately 400,000 gallons at two feet of freeboard.

19. During the fresh pack season, a 10,000-gallon per minute flume system is used to transfer tomatoes from trucks to the processing facility. The flume water, which contains soil, plant debris, and pieces of broken tomatoes, is screened and continuously recycled through an unlined pond known as the flume water recycling pond.

20. During a facility inspection on 16 April 2001, gross tomato solids were observed in the flume water recycling pond and the decomposing solids generated an unpleasant odor that extended to near the property boundary. The Discharger will construct improvements to prevent objectionable odors and groundwater degradation from the flume water recycling system.

21. The bean processing system generates wastewater that has a relatively high pH and contains small amounts of food grade oil and grease. This waste stream undergoes fine screening and dissolved air flotation in a separate pre-treatment system at the facility prior to discharge to the Aerated Pond.

22. Waste solids are from all process streams are discharged into hoppers below the screen system, and ultimately are taken off-site for disposal.

23. Based on effluent monitoring data presented in the RWD, the wastewater discharged to the land application areas is characterized as follows:

Constituent	Ranch Pond Effluent [1, 2]	Aerated Pond Effluent
BOD_5 (mg/L)	400 to 1,200	40 to 90
Total Dissolved Solids (mg/L)	800 to 1,300	630 to 670
pH	4.4 to 5	7.5 to 7.8
Electrical Conductivity (mg/L)	700 to 1,800	1,100
Nitrate Nitrogen (mg/L)	<0.1 to 1.8	0.6 to 7.4
Total Kjeldahl Nitrogen (mg/L)	28 to 45	9 to 18
Total Nitrogen (mg/L)	29 to 45	15 to 25
Total Coliform Organisms (MPN/100 mL)	>16,000	>16,000
Fecal Coliform Organisms (MPN/100 mL)	>16,000	9,000 to >16,000

1 Based on analysis of four samples in 2001.

2 Ranch Pond effluent is essentially the same as the Aeration Pond influent, as the Ranch Pond provides no treatment.

24. Wastewater from the Aerated Pond and the Ranch Pond is currently used to irrigate approximately 450 acres of cattle pasture in the Northern Area, which comprises five discrete irrigation subareas, as shown on Attachment C:

    a. The Haney subarea consists of 62 gross acres bounded on the north by the Oakdale Irrigation District (OID) Riverbank Lateral and on the east by the Oakdale-Waterford Highway.

    b. The Kaufman-Connolly subarea consists of 179 gross acres bounded on the west by Kaufman Road and on the east by Albers Road.

    c. The Van Dyke property comprises three separate subareas: Van Dyke A (74 gross acres), Van Dyke B (61 gross acres), and Van Dyke C (76 gross acres)

    Net areas available for wastewater application will be less due to onsite structures and setbacks.

25. All subareas within the Northern Area are irrigated by the border strip method of irrigation. Currently, tailwater and storm water flow into either the Van Dyke Drain or the Cavill Drain. The Cavill Drain originates east of the Northern Area and also carries tailwater and runoff from upgradient agricultural land. The Van Dyke Drain is tributary to the Cavill Drain and originates on the Van Dyke Property.

26. Tailwater and runoff flows into the Van Dyke Drain from the Van Dyke A subarea and the northern portions on the Van Dyke B, Haney, and Kaufman-Connolly subareas, and is intercepted by the Van Dyke North Pond (Tailwater Pond A), which was constructed to detain tailwater for

recycling. Tailwater Pond A currently has approximately 600,000 gallons of storage capacity at two feet of freeboard and overflow, which is currently allowed under Order No. 97-069, discharges into the Cavill Drain.

27. The Van Dyke C subarea and the southern portions of the Van Dyke B, Haney, and Kaufman-Connolly subareas drain directly into the Cavill Drain. These tailwater and storm water flows are intercepted by the Van Dyke South Pond (Tailwater Pond B), which can overflow into the Cavill Drain. Tailwater Pond B currently has approximately 300,000 gallons of storage capacity at two feet of freeboard, and overflow into the Cavill Drain is also currently allowed under Order No. 97-069.

28. Both of the Van Dyke tailwater ponds are equipped with aerators and pumps to recycle the tailwater back into the irrigation supply system.

Planned Changes in Discharge

29. ConAgra plans to eliminate all surface water discharge points in the Northern Area and expand the land application areas to include an additional 1,216 gross acres (the Southern Area), which comprises the 925-acre Brichetto Ranch and the 291-acre Amaral Ranch. In addition, the Van Dyke C subarea will be placed back in use.

30. The planned Southern Area is divided into five discrete irrigation subareas, which are defined by irrigation canals and drains that traverse the property, as shown on Attachment D and described below. In general, drainage in these subareas is to the nearest agricultural drain (i.e., the Bancroft or Cavill Drain). Because of irrigation setbacks and on-site structures (roads, etc.), the usable land application area is typically 5 to 10 percent less than the gross area.

    a. The Brichetto North subarea consists of approximately 348 gross acres adjacent to the north side of the Cavill Drain, and includes a 35-acre feedlot and an unlined tailwater pond known as the Brichetto Lagoon. Tailwater and runoff drain into the Cavill Drain.

    b. The Brichetto South subarea consists of approximately 488 gross acres bounded on the north by the Cavill Drain and on the south by the Mootz Lateral Canal. The Bancroft Drain enters this subarea from the east, flows westward, and connects to the Cavill Drain near the Brichetto Lagoon.

    c. The Brichetto-Mootz subarea (approximately 89 gross acres) is bounded on the north by the Mootz Lateral and on the south by Claribel Road. Currently, tailwater and runoff drain to either of two unnamed channels that direct the flow off-site.

    d. The Amaral North subarea (approximately 234 gross acres) is traversed by the Cavill Drain and an unnamed tributary drainage which originates upstream of the property.

e. The Amaral South subarea comprises approximately 67 gross acres bounded on the south by the Mootz Lateral. The Bancroft Drain originates in this subarea.

31. The Discharger must make certain improvements to the land application areas in order to comply with the requirements of this Order. The RWD states that the Discharger will make improvements in phases as described below.

a. During Phase I of the expansion, process wastewater will be applied at the Brichetto South and Amaral South subareas (555 gross acres). Phase I began on 2 April 2002 with a temporary waiver (authorized under Regional Board Resolution No. 82-036 by the Executive Officer) and will end shortly after adoption of this Order.

b. During Phase II, the Discharger will expand the discharge area to include the Brichetto North and Amaral North subareas for a total of 1,137 gross acres. The Discharger plans to complete the Phase II improvements by 30 June 2002, and Phase II will continue until 30 December 2002.

c. During Phase III, the Brichetto-Mootz, Haney, Kaufman-Connolly, Van Dyke A, and Van Dyke B subareas will be included in the discharge area for a total of 1,602 gross acres. The required site improvements are expected to be complete by 30 December 2002.

d. During the optional final phase, the Van Dyke C subarea (76 acres gross area) may also be used for land application.

32. To prepare for Phase III, the Discharger proposes to modify Tailwater Pond A in the Northern Area to provide approximately 2.4 millions gallons of storage capacity and eliminate the pond overflow structure. The Van Dyke Drain will be used to convey tailwater to the pond during the irrigation season and storm water to the Cavill drain during the rainy season. To eliminate tailwater discharges to surface water, the Discharger will construct a flow diversion structure in the Van Dyke drain to direct flows to either Tailwater Pond A or the Cavill Drain. During the rainy season, wastewater irrigation will be limited. The Van Dyke Drain flow control structure will be opened to allow storm water to flow into the Cavill Drain and the drop box valves to the subsurface drains will be closed only after sufficient time has passed to allow infiltration of all wastewater and complete drainage of tailwater from the Van Dyke Drain to Tailwater Pond A.

33. The Discharger also proposes to enlarge Tailwater Pond B and remove the overflow weir to provide sufficient storage capacity for tailwater originating in its tributary area. To prevent tailwater from entering the Cavill Drain, an earthen berm and subsurface drainage pipe will be constructed along the entire northern side of the Cavill Drain within the Northern Area. A similar berm and subsurface drain system with double-valved drop boxes will be constructed along the southern side of the Cavill Drain. This system will allow the Discharger to direct tailwater to Tailwater Pond B and, when appropriate, discharge storm water runoff to the Cavill Drain.

34. The engineering design of improvements for Tailwater Ponds A and B has not been finalized, and the actual storage capacities will be determined during final design. Excess tailwater from one or both of these ponds will be pumped to a new storage pond to be constructed in the new Southern Area (the Amaral Pond).

35. Under current site conditions, tailwater and/or contaminated storm water runoff from the Northern Area could discharge into the Van Dyke and Cavill Drains. Therefore, it is appropriate to prohibit discharge to the Northern Area until all the required improvements are constructed and the Discharger submits as-built tailwater control system drawings and a revised water balance that demonstrates adequate tailwater storage capacity.

36. All properties in the Southern Area will be irrigated with wastewater from the Ranch Pond and Aerated Pond by the border strip method of irrigation.

37. Portions of the Brichetto South subarea that would ordinarily drain directly into the Cavill Drain have been retrofitted with a subsurface drain system that returns tailwater to the Brichetto Lagoon, but allows selective release of storm water runoff directly into the Cavill Drain via a series of double-valved drop boxes. The drop boxes have separate valves to divert flows to either a subsurface drainage pipe that discharges into the Brichetto Lagoon or an outfall to the Cavill Drain. The south side of the Cavill Drain is bermed to prevent overland flow into the drain. This tailwater return system serves the Brichetto South and South Amaral subareas only.

38. The Bancroft Drain converges with the Cavill Drain near the Brichetto Lagoon, and there is a concrete flow control structure at that point with separate valves to direct flows from the Bancroft Drain into either the Brichetto Lagoon or the Cavill Drain.

39. The Discharger will use the Bancroft Drain to convey tailwater generated during the irrigation season (approximately mid-March through November) to the Brichetto Lagoon. During the rainy season, wastewater irrigation will be limited. The Bancroft Drain flow control structure will be opened to allow storm water to flow into the Cavill Drain and the drop box valves to the subsurface drains will be closed only after sufficient time has passed to allow infiltration of all wastewater and complete drainage of tailwater from the Bancroft Drain to the Brichetto Lagoon.

40. A new storage lagoon (the Amaral Pond) will be constructed in the southeast corner of the South Amaral subarea prior to Phase III. This pond will be used to store excess tailwater from Tailwater Ponds A and B in the Northern Area, excess wastewater from the processing facility, and excess tailwater from the Brichetto Lagoon. Water stored in the Amaral Pond will be recycled for irrigation.

41. The final design for the Amaral Pond has not been completed, but it is expected to cover an area of about 8 acres and to provide storage capacity of about 27 million gallons. The earthen containment berms of the pond will be up to 12 feet above the surrounding grade.

42. The required wastewater distribution and tailwater management systems have only been constructed to serve the Brichetto South and Amaral South subareas (i.e., Phase I). Therefore it is appropriate to limit wastewater flows from the cannery and prohibit land application to the other subareas until the Executive Officer has verified that all the required improvements have been constructed, adequate tailwater control systems are in place, and the Discharger has demonstrated adequate wastewater and tailwater storage capacity.

43. Proposed water application rates range from 2.5 to 8 inches per application. The frequency of irrigation will vary depending on the weather, but the Discharger expects to irrigate approximately every 7 to 12 days during the irrigation season. This Order restricts the frequency and rate of wastewater application to prevent groundwater degradation and nuisance odors. At the proposed initial discharge rate of 1.3 mgd for the Brichetto South and Amaral South subareas (the only areas prepared to receive wastewater during Phase I), estimated annual loading rates for nitrogen, TDS, and BOD are as follows:

Constituent	Concentration [1] (mg/L)	Average Daily Flow (mgd)	Annual Mass Discharged (lb)	Mass Loading Rate [3] (lb/ac/year)
Total Nitrogen	27	1.3	107,000	197
Total Dissolved Solids	813	1.3	3,220,000	5,900
BOD	386	1.3	1,530,000	2,800

[1] Flow weighted mean.
[2] Applies April through June 2002 only.
[3] Based on an estimated net usable application area of 543 acres.

44. The Discharger's proposed flow limits for Phases II and III imply a total annual discharge of up to 691 million gallons. If the Phase II improvements are not constructed before the 2002 fresh pack season and, and all of this wastewater is applied to the Brichetto South and Amaral South subareas, estimated annual loading rates for nitrogen, TDS, and BOD would be as follows:

Constituent	Concentration [1] (mg/L)	Average Daily Flow [2] (mgd)	Annual Mass Discharged (lb)	Mass Loading Rate [3] (lb/ac/year)
Total Nitrogen	27	1.9	156,000	290
Total Dissolved Solids	813	1.9	4,700,000	8,700
BOD	386	1.9	2,230,000	4,100

[1] Flow weighted mean.
[2] Based on proposed annual discharge of 691 million gallons.
[3] Based on an estimated net usable application area of 543 acres.

Such loading rates would exceed the agronomic rates for nitrogen and water, and might cause nuisance odors and/or groundwater degradation.

45. The Discharger plans to complete the required improvements to the North Brichetto and North Amaral subareas shortly after adoption of this Order. Completion of those improvements will bring approximately 582 additional acres into service for a total of approximately 1,137 gross acres during Phase II. If the proposed total annual flow of 691 million gallons were to be applied to 1,137 gross acres (approximately 1,040 usable acres), estimated annual loading rates for nitrogen, TDS, and BOD during Phase II would be as follows:

Constituent	Concentration [1] (mg/L)	Average Daily Flow [2] (mgd)	Annual Mass Discharged (lb)	Mass Loading Rate [3] (lb/ac/year)
Total Nitrogen	27	1.9	156,000	150
Total Dissolved Solids	813	1.9	4,700,000	4,500
BOD	386	1.9	2,230,000	2,100

[1] Flow weighted mean.

[2] Based on proposed annual discharge of 691 million gallons with flows of 5.3 mgd July through October and 1.3 mgd in November through June.

[3] Based on an estimated net usable application area of 1,040 acres.

Such loading rates would not exceed the agronomic rates for nitrogen, but might still degrade groundwater quality with salinity constituents if allowed to continue for an extended period.

46. Based on the information contained in Findings 43 and 44, it is appropriate to assign flow limits that are structured to ensure that adequate land disposal area is made available in a timely fashion to prevent overloading on any application area and to require completion of reports certifying that the required site improvements have been constructed prior to discharge.

47. Individual landowners may use supplemental fertilizers, but the RWD states that the total nitrogen loading from all sources (including cattle waste) will not exceed the crop needs.

48. The Discharger submitted a water balance with the RWD that indicates there will be adequate land disposal and storage capacity to accommodate the proposed monthly flow rates. However, the water balance did not demonstrate that the total wastewater and tailwater storage capacity will comply with the Regional Board's standard design criteria (i.e., sufficient capacity to ensure two feet of freeboard during the 100-year total annual precipitation event). Therefore, it is appropriate to require that the Discharger resubmit the water balance and final design documentation for new and/or improved storage ponds prior to each phase of the expansion to demonstrate that these criteria will be satisfied. It is also appropriate to require the Discharger to bring all permitted land

application areas into service within a specified timeframe to ensure application rates are not excessive.

49. The flume water recycling system will be retrofitted to reduce the potential for objectionable odors and groundwater degradation at the processing facility. The Discharger has not committed to a specific plan, but states that the improvements may include an improved solids removal system, lining the pond, and/or constructing a closed recycle system with no storage pond. These improvements will be completed by 1 June 2003. Allowing additional time to complete the improvements does not relieve the Discharger of the obligation to prevent objectionable odors from the flume water recycling pond.

Site-Specific Conditions

50. Surface soils at the land application sites are primarily clays, silt, and clayey sands with low permeability. These soils are typically underlain by apparently discontinuous layers or lenses of low- to medium-permeability fine-grained soils and silty sands and high-permeability gravels.

51. The land application sites are characterized by gently rolling topography with slopes of less than two percent. Expected tailwater generation rates range from 10% to 30% of the applied water volume.

52. All of the land application sites are planted in a mixture of pasture grasses, primarily fescue with ladino clover, which can utilize up to 230 pounds of total nitrogen per acre per year.

53. The average annual precipitation in the vicinity of Oakdale is 14.6 inches, and the 100-year total annual precipitation is 26.8 inches.

54. The reference evapotranspiration rate (ET_0) for the Oakdale area is approximately 53 inches.

Groundwater Considerations

55. Shallow groundwater is typically encountered at approximately 60 feet below the ground surface at the processing facility.

56. The Discharger has performed groundwater monitoring at the processing facility in accordance with the applicable Monitoring and Reporting Program since 1997. The current groundwater monitoring system is shown on Attachment B. Based on the Discharger's groundwater monitoring data, the gradient is typically southerly to southwesterly.

57. Monitoring well MW-1 is downgradient of the Aerated Pond. Monitoring wells MW-2, MW-3, and MW-4 are upgradient of the bin storage area, the settling pond, and the Ranch Pond, respectively. Based on distance from the wastewater treatment and storage ponds and its cross-gradient location, MW-2 appears to provide the best evidence of background groundwater quality

for the processing facility. However, none of the upgradient wells are near the upgradient processing facility property boundary, none are positioned to monitor groundwater upgradient of the flume water recycle pond, and there is only one downgradient well.

58. The following table summarizes groundwater monitoring data for the processing facility since 1997.

	Historical Range of Concentrations			
Processing Facility Monitoring Well Location	Nitrate (mg/L as nitrate)	Electrical Conductivity (µmhos/cm)	pH (standard units)	Chemical Oxygen Demand (mg/L)
MW-1	12 to 26	420 to 680	6.7 to 8.3	<10 to 50
MW-2	16 to 44	320 to 500	7.1 to 7.9	< 10 to 50
MW-3	<1 to 4	390 to 620	6.7 to 7.0	<10 to 30
MW-4	9 to 57	630 to 1,100	6.9 to 7.6	<10 to 70

59. Based on these data, there is evidence of groundwater degradation at the processing facility, but the data are inconclusive. Therefore, it is appropriate to require that the Discharger install additional upgradient and downgradient monitoring wells and determine whether the discharge has degraded groundwater beneath the processing facility.

60. The Discharger installed three groundwater monitoring wells and performed limited groundwater monitoring at the Northern Area utilizing those wells and two CPT/Hydropunch™ sampling locations in October 2001. The groundwater monitoring system is shown on Attachment C. Shallow groundwater was found approximately 60 feet below the ground surface. The gradient at the Northern Area was southwesterly. Based on the measured gradient during one monitoring event, MW-8, MW-9, and HP-9 appear to provide the best evidence of upgradient groundwater quality and MW-6 appears to represent downgradient conditions. The following table summarizes groundwater monitoring data for the Northern Area.

	Northern Area Monitoring Well Location					
Analytical Result (mg/L unless otherwise noted)	MW-6	MW-7	MW-8	MW-9	HP-8	HP-9
pH [1]	6.47	6.27	6.71	6.55	7.61	7.66
Electrical Conductivity [2]	400	350	450	660	450	730
Total Dissolved Solids	440	240	320	520	350	460
Calcium	60	35	55	61	42	72
Potassium	4.3	2.2	3.5	3.7	3.6	5.6
Magnesium	30	20	27	41	17	31
Sodium	46	21	20	32	22	39
Chloride	68	41	23	150	11	42
Fluoride	<1	<1	<1	<1	0.25	<0.1

Analytical Result (mg/L unless otherwise noted)	Northern Area Monitoring Well Location					
	MW-6	MW-7	MW-8	MW-9	HP-8	HP-9
Phosphate	<5	<5	<5	<5	<0.01	<0.05
Sulfate	7.8	7.8	8.7	7.1	11	20
Ammonia Nitrogen	<0.082	<0.082	<0.082	<0.082	0.15	<0.082
Nitrate Nitrogen	9.1	3.2	3.9	14	3.3	<0.053 [4]
Total Kjeldahl Nitrogen	<0.50	<0.5	0.98	<0.05	<0.5	<0.5
Total Coliform Organisms [3]	110	95	<1.8	13	350	31
Fecal Coliform Organisms [3]	6.8	2	<1.8	4.5	<1.8	1.8

1 Reported as standard pH units.

2 Reported as µmhos/cm.

3 Reported as MPN/100 mL.

4 Sample was analyzed outside the holding time for nitrate. Analyses were completed for both nitrate and nitrite, and results were reported as nitrate plus nitrite nitrogen.

61. Based on these data, there is some evidence of groundwater quality impacts for sodium, nitrate, and coliform organisms. However, because there has only been one sampling event, the data are inconclusive.

62. The Discharger installed three groundwater monitoring wells and performed limited groundwater monitoring at the Southern Area in mid-2001. Additional subsurface and groundwater data were obtained from three more monitoring wells and six CPT/Hydropunch™ sample locations in October 2001. The groundwater monitoring system is shown on Attachment D.

63. Based on one monitoring event, the water table in the Southern Area is approximately 60 feet below the ground surface, and the gradient is to the southwest. Monitoring well MW-6, which is near the northeastern corner of the Southern Area, may be most representative of upgradient groundwater quality for the Southern Area. Monitoring wells MW-3, -4, and -5 appear to be downgradient.

64. The following table summarizes baseline (pre-discharge) groundwater monitoring data for the Southern Area in 2001.

Analytical Result (mg/L unless otherwise noted)	Southern Area Monitoring Well Location					
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
pH [1]	7.32	7.07	7.71	6.97	7.49	6.47
Electrical Conductivity [2]	780	700	730	400	485	400
Total Dissolved Solids	450	420	410	340	360	440
Calcium	56	66	49	44	53	60

Analytical Result (mg/L unless otherwise noted)	Southern Area Monitoring Well Location					
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Potassium	3.6	3.9	15	3.1	2.3	4.3
Magnesium	26	31	24	21	25	30
Sodium	30	31	95	32	35	46
Chloride	34	42	80	25	43	68
Fluoride	<1	<1	<1	<1	<1	<1
Phosphate	<5	<5	<5	<5	<5	<5
Sulfate	11	36	17	33	19	7.8
Ammonia Nitrogen	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082
Nitrate Nitrogen	3.4	11	2	8.4	3.7	9.1
Total Kjeldahl Nitrogen	<0.50	<0.50	1.6 [4]	<0.50	<0.50	<0.50
Total Coliform Organisms [3]	<2	<2	800 [4]	>16,000	2,200	110
Fecal Coliform Organisms [3]	<2	<2	1.6 [4]	2,200	<1.8	6.8

1 Reported as standard pH units.

2 Reported as µmhos/cm.

3 Reported as MPN/100 mL.

4 Value represents analytical result for a second round of sampling to verify initial results. The Discharger's consultant believes the well may have been contaminated with surficial soil during well installation.

65. The following table summarizes baseline (pre-discharge) groundwater monitoring data for the six Hydropunch™ groundwater samples obtained in the Southern Area in October 2001. Samples HP-2 and -3 are upgradient of the Southern Area, and sample HP-1 is downgradient near MW-3.

Analytical Result (mg/L unless otherwise noted)	Southern Area Hydropunch Sample Location					
	HP-1	HP-2	HP-3	HP-4	HP-5	HP-6
pH [1]	7.62	7.46	7.57	7.38	7.74	7.42
Electrical Conductivity [2]	560	450	740	620	710	590
Total Dissolved Solids	540	270	430	370	430	350
Calcium	96	47	74	48	72	53
Potassium	6.9	6.1	5.7	5.4	3.7	6.1
Magnesium	43	22	31	22	33	25
Sodium	45	36	25	49	24	33
Chloride	41	12	45	32	15	27
Fluoride	<1	<1	<1	<1	0.34	<1
Phosphate	<0.01	<5	<5	<5	0.092	<5
Sulfate	33	7.1	20	10	13	12
Ammonia Nitrogen	0.16	0.1	<0.082	<0.082	0.09	<0.082
Nitrate Nitrogen	2.3	<0.053 [4]	<0.053 [4]	<0.053 [4]	1.5	<0.053 [4]
Total Kjeldahl Nitrogen	<0.5	<0.5	1	0.95	<0.5	<0.5
Total Coliform Organisms [3]	2	49	1,100	4.5	4.5	12

	Southern Area Hydropunch Sample Location					
Analytical Result (mg/L unless otherwise noted)	HP-1	HP-2	HP-3	HP-4	HP-5	HP-6
Fecal Coliform Organisms [3]	<1.8	<2	1.8	<1.8	<1.8	12

1 Reported as standard pH units.

2 Reported as µmhos/cm.

3 Reported as MPN/100 mL.

4 Sample was analyzed outside the holding time for nitrate. Analyses were completed for both nitrate and nitrite, and results were reported as nitrate plus nitrite nitrogen.

66. Based on these data, it appears that monitoring wells MW-3, -4, and -5 show some evidence of sodium, chloride, and coliform impacts predating any discharge of waste to the land. The Hydropunch samples also show some evidence of salinity impacts, possibly resulting from past agricultural practices. However, because there has only been one sampling event, the data are inconclusive. One or more additional wells are needed to monitor groundwater downgradient of the proposed Amaral Pond. If future monitoring shows evidence of degradation downgradient of the Brichetto Lagoon, then further additional monitoring locations may be needed to confirm the source.

67. In summary, there is some evidence of groundwater degradation at the processing facility and the existing land application area (the Northern Area). However, more data are needed to make a conclusive determination. Therefore, it is appropriate to require that the Discharger install additional monitoring wells at the processing facility and implement a more extensive groundwater monitoring program to determine applicable background concentrations and whether the discharge has degraded groundwater beneath the processing facility and the Northern Area.

Land Application Area Agreements

68. Staff has reviewed ConAgra's current agreements with the owners of the proposed land application areas. Key elements of these agreements are summarized below:

    a. The agreement between ConAgra and John Brichetto was executed in January 1999 and expires in December 2022. The agreement covers approximately one-half of the Brichetto Ranch and limits the flow rate of wastewater to four cubic feet per second during the primary irrigation season. During the rainy season (after November 1), flows are limited to a "reasonable" amount. The agreement provides for ConAgra's future leasing of the other one-half of the Brichetto Ranch with the same flow rate limitations. The agreement allows grazing for up to 1,500 head of cattle. The agreement includes an attachment of "management guidelines", and states that John Brichetto will manage the wastewater application. On 7 January 2002, ConAgra issued a purchase order to expand this agreement to include the Amaral Ranch, which is also to be managed by John Brichetto in accordance with Waste Discharge Requirements adopted by the Regional Board.

b. A second agreement between ConAgra and John Brichetto covers 135 acres of the Kaufman Ranch that are owned and managed by John Brichetto. The agreement was executed in March 1999 and expires in December 2003. Under the terms of the agreement, wastewater flows will range from 378 to 1,131 gallons per minute (0.84 to 2.5 cubic feet per second). John Brichetto will manage the wastewater application.

c. The agreement between ConAgra and the owners and heirs of the Kaufman estate was executed in July 1999 and expires in June 2002. This agreement covers the remaining 44 acres of the Kaufman Ranch, which are owned by the Kaufman family. The agreement stipulates that the land is leased to, and will be managed by, John Brichetto. Wastewater flows are to be approximately 400 gallons per minute (0.9 cubic feet per second).

d. The agreement between ConAgra and Marcus Haney was executed in July 1994 and expires in June 2006. It allows flow rates of 500 to 1,500 gallons per minute (1.1 to 3.3 cubic feet per second) for irrigation of 60 acres. The agreement does not stipulate which party is responsible for managing the discharge.

e. The agreement between ConAgra and Kenneth Van Dyke was executed in July 1996 and expires in July 2006. No flow rate is specified, but the agreements covers irrigation of 205 acres of grazed pasture. Ken Van Dyke will manage the wastewater application.

Special Considerations for Food Processing Waste

69. Excessive application of food processing wastewater to land application areas can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the shallow soil profile and causing waste constituents (organic carbon, nitrate, other salts, and metals) to percolate below the root zone. The Discharger must perform additional monitoring and submit a groundwater impacts assessment technical report. If the technical study establishes that groundwater has been degraded, the Discharger must evaluate technology and source control measures to improve the quality of the waste or reduce loading rates to preclude the discharge being a continuing source of degradation. If the Discharger is unable to modify its waste stream or disposal methods such that groundwater quality will not be impacted, then the Discharger shall either submit technical documentation that its treatment and control and resulting degradation are consistent with State Board Resolution No. 68-16 or a plan for full containment pursuant to Title 27 of the California Code of Regulations, Section 20005 et seq. (hereafter Title 27).

70. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

71. According to *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency (US EPA Publication No. 625/3-77-0007) (hereafter *Pollution Abatement*), in applying food-processing wastewater to land for biological treatment, the loading of BOD_5 should not exceed 100 lbs/acre/day (average) to prevent nuisance odors.

72. Acidic soil conditions can be detrimental to land treatment system function, and may also cause groundwater degradation. If the buffering capacity of the soil is exceeded and soil pH decreases below 5, naturally occurring metals (including iron and manganese) may dissolve and degrade underlying groundwater. *Pollution Abatement* recommends that water applied to crops have a pH within 6.4 to 8.4 to protect crops.

73. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and issuance of this Order does not create a vested right to continue the discharge. Failure to provide the level of management required to assure best practicable treatment and control, preclude conditions that threaten degradation or nuisance, and protect groundwater quality will be sufficient reason to enforce this Order, modify it, or revoke it and prohibit further discharge. This Order prescribes limits for BOD loading, nutrient loading, water application rates, and pH, but it remains the responsibility of the Discharger to assure that its waste loading practices do not degrade groundwater or create a condition of pollution or nuisance. Acceptable loading rates established in this Order are subject to change if performance is not as represented.

Basin Plan, Beneficial Uses, and Regulatory Considerations

74. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.

75. Surface water drainage is to the Stanislaus River. The beneficial uses of the Stanislaus River are municipal and domestic supply; agricultural irrigation and stock watering; industrial process, service, and power supply; contact, non-contact, and canoeing/rafting recreation; warm and cold fresh water habitat; cold water migration; warm and cold water spawning; and wildlife habitat.

76. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

77. State Board Resolution No. 68-16 prohibits degradation of groundwater quality unless it has been shown that:

    a. The degradation is consistent with the maximum benefit to the people of the State
    b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
    c. The degradation does not cause exceedance of one or more water quality objectives; and

d. The discharger employs best practicable treatment and control to minimize degradation.

The Board has considered antidegradation pursuant to State Board Resolution No. 68-16, and finds that the Discharger has not provided the required demonstration to be allowed to cause groundwater degradation, and therefore none is authorized.

78. Federal regulations for storm water discharges promulgated by the U.S. Environmental Protection Agency (40 CFR Parts 122, 123, and 124) require specific categories of facilities which discharge storm water to obtain NPDES permits. The Discharger has obtained coverage for its processing facility under the State Board's Water Quality Order No. 97-03-DWQ to comply with those regulations.

79. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2002-0098 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

80. The action to update waste discharge requirements for the processing facility and land application of waste at the Northern Area is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with Title 14 CCR, Section 15301.

81. The planned use of the Southern Area for land application of waste constitutes an expansion of the discharge area that triggers the CEQA environmental review process. The Regional Board, as lead agency, developed an Initial Study based on information provided by the Discharger in the RWD and a draft Initial Study. The Regional Board has determined that the project would not cause any significant environmental impacts if appropriate mitigation measures are implemented, and adopted a Mitigated Negative Declaration for expansion to the Southern Area on 7 June 2002. The following mitigation measures are required:

a. To prevent nuisance odors:
   1. Maintain the dissolved oxygen concentration in all ponds above 1.0 mg/L at all times.
   2. Construct and operate tailwater management systems to minimize ponding of tailwater in areas where it will take more than 24 hours to infiltrate.
   3. Ensure that the maximum daily BOD loading to the land application areas does not exceed any of the following:
      i. 100 pounds per acre per day as a cycle average;
      ii. 800 pounds per acre per day as a daily maximum; and
      iii. The maximum rate that is consistent with preventing odors.

b. To prevent surface water quality impacts:
   1. Ensure that all site personnel are familiar with the proper use and function of any valves that allow discharge to the Bancroft, Van Dyke, and Cavill Drains.
   2. Maintain all valves that allow tailwater/runoff flow into the Bancroft, Van Dyke, and Cavill Drains and repair immediately as needed.
   3. Design pond capacities to provide for two feet of freeboard at all times.
   4. Limit winter application of wastewater to the water needs of the crops.
   5. Release storm water runoff from the application sites to the Cavill Drain only after the following:
      i. All wastewater has infiltrated; and
      ii. Organic materials are sufficiently oxidized; and
      iii. Minor precipitation has occurred without generating runoff and had completely infiltrated; or
      iv. The first flush of storm water runoff has been captured and stored.

c. To prevent groundwater degradation:
   1. Limit rates for all waste constituents to the capacity for land treatment (oxidation) and assimilation (cation exchange and adsorption) within the vadose zone.
   2. Limit water application rates to minimize deep infiltration of waste constituents not amenable to land treatment .
   3. Development and implement a salinity source reduction plan.

It is appropriate that this Order incorporate specifications and provisions that implement these mitigation measures and require that the Discharger perform monitoring to demonstrate their effectiveness.

82. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Section 13801 of the CWC, apply to all monitoring wells.

83. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq., (hereafter Title 27). The exemption pursuant to Section 20090(b), is based on the following:

    a. The Regional Board is issuing waste discharge requirements,
    b. The discharge complies with the Basin Plan, and
    c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.

Public Notice

84. The Regional Board considered all the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, in establishing the following conditions of discharge.

85. The Regional Board has notified the Discharger, and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

86. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 97-069 and the waiver dated 2 April 2002 are rescinded and, pursuant to Sections 13263 and 13276 of the California Water Code, ConAgra Grocery Products Company, Ken Van Dyke, Marcus Haney, Jill Kaufman-Connolly, John Brichetto, Tony Amaral, and their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions:

1. Land application of wastewater to areas other than those described in Finding Nos. 4 through 6 inclusive and Finding Nos. 24 and 30 is prohibited.

2. Land application of wastewater to any subarea or irrigation check not having a fully functional tailwater/runoff control system expressly approved by the Executive Officer is prohibited. Upon adoption of this Order, the Discharger is only authorized to discharge to the Brichetto South and

Amaral South subareas until the Discharger demonstrates that such systems have been constructed in the other subareas described in this Order.

3. Discharge of unscreened wastewater is prohibited.

4. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

5. Discharge of irrigation tailwater from any of the designated land application areas directly to the Cavill Drain via overland flow or drain outfall structures is prohibited.

6. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15, or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.

B. Discharge Specifications:

1. Upon adoption of this Order, the monthly average discharge to the Brichetto South and Amaral South land application areas shall not exceed 1.3 mgd.

2. The following flow limits shall be in effect upon the Executive Officer's written approval of the report described in Provision F.1.a:

   a. During the remanufacturing season (approximately 15 October through 30 June), the monthly average wastewater flow to the land application areas shall not exceed 1.3 mgd and the peak daily flow shall not exceed 2.0 mgd.

   b. During the fresh pack season (approximately 1 July through 14 October), the monthly average wastewater flow to the land application areas shall not exceed 5.3 mgd.

3. The maximum BOD_5 loading to each land application area irrigation check shall not exceed any of the following:

   a. 800 lbs/acre on any single day;

   b. 100 lbs/acre/day as a cycle average; and

   c. The daily and cycle average loading rate that ensures compliance with Discharge Specifications B.6 and B.17 and the Groundwater Limitations.

   Loading calculations shall be performed as specified in the attached Monitoring and Reporting Program No. R5-2002-0098, which is a part of this Order.

4. The maximum total nitrogen loading to each land application area irrigation check shall not exceed the agronomic rate for plant available nitrogen (PAN) for the type of crop to be grown, as

specified in the most recent edition of the Western Fertilizer Handbook unless and until the Discharger demonstrates that another proportion is technically justified as specified in Provision F.2. PAN shall be calculated as 100% of the total nitrogen content of the waste plus nitrogen contributions from all other sources, including livestock and supplemental fertilizers.

5. The wastewater discharged to the irrigation areas and storage ponds shall not have a pH of less than 6.5 nor greater than 8.5.

6. Objectionable odors originating at the processing facility and all land application areas shall not be perceivable beyond the respective property limits.

7. As a means of discerning compliance with Discharge Specification No. 6, the dissolved oxygen content in the upper one foot of any pond shall not be less than 1.0 mg/l. This requirement applies to all open structures that contain process wastewater or irrigation tailwater, whether used for storage, treatment, or recycling. Because of its function and location, the Brichetto Lagoon is provisionally exempt from this requirement.

8. The processing facility shall be managed to prevent breeding of mosquitoes. Specifically:
   a. Ponds shall be maintained essentially free of emergent, marginal, and floating vegetation;
   b. Dead algae, vegetation, and debris shall not accumulate on the water surface.
   c. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
   d. Low pressure and unpressurized pipelines accessible to mosquitoes shall not be used to store wastewater.

9. No physical connection shall exist between wastewater piping and any domestic water supply well, or between wastewater piping and any irrigation well that does not have an air gap or reduced pressure principle device.

10. All treatment, storage, and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

11. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

12. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.

13. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter months. Design seasonal precipitation shall be based on total annual

precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

14. Freeboard in any pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.

15. On or about **15 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.13 and B.14.

16. The Discharger shall implement Best Practicable Treatment and Control (BPTC) technology to minimize the salinity of the discharge sufficient to comply with the Groundwater Limitations of this Order.

17. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.

C. Land Application Area Specifications

1. Hydraulic loading of wastewater shall be at rates designed to minimize percolation below the evaporative/root zone, except as needed to promote surface soil chemistry that is consistent with sustainable use as irrigated pasture.

2. The Discharger may open the Bancroft Drain flow control structure, any similar structure that may be constructed along the Van Dyke Drain, and any drop box direct outfall valves to allow storm water runoff to be released into the Cavill Drain only when the average daily BOD loading rate since the last application of wastewater is less than 100 lb/ac/day (i.e., the mass of BOD applied per unit area divided by the number of days since application ceased is less than 100 lb/ac/day); and

   a. At least 24 hours have elapsed since the end of the last irrigation event and more than one inch of precipitation has fallen within the last 12 hours; or

   b. At least 24 hours have elapsed since the end of the last irrigation event and more than 0.25 inches of precipitation have fallen within the last 24 hours.

3. Irrigation with wastewater shall not be performed within 24 hours before a predicted storm, during precipitation, or within 24 hours after the end of any precipitation event, nor shall it be performed when the ground is saturated.

4. There shall be no standing water in any portion of the irrigation checks, the Van Dyke Drain, or the Bancroft Drain 24 hours after application of wastewater ceases.

5. The discharge shall be distributed uniformly across each discrete irrigation check to the maximum practical extent.

6. At a minimum, there shall be a 7-day drying/resting period between wastewater applications.

7. Wastewater application rates for the irrigation areas shall comply with the following:

   a. Nutrient mass loading rates shall neither exceed agronomic rates for the crop to be planted nor cause groundwater degradation;

   b. Degradable organic (BOD) mass loading rates shall not create a nuisance and shall not degrade groundwater quality; and

   c. Mass loading rates for nutrients and degradable organic compounds shall be based on the character of the wastewater, crop, soil, climate, other nutrient sources, and irrigation management system.

8. The discharge shall not cause the buffering capacity of the soil profile to be exceeded.

9. The Discharger shall provide the following setbacks for all irrigation subareas:

Setback Definition	Surface Irrigation Setback (feet)
Edge of irrigated area [1] to public property (e.g., street)	10
Edge of irrigated area to other agricultural property [2]	0
Edge of irrigated area to occupied residence (on-site) [3]	10
Edge of irrigated area to occupied residence (off-site)	50

[1] As defined by the wetted area produced during irrigation.
[2] Provided that wastewater and tailwater are kept within the property boundary.
[3] Provided that both the owner and the occupant of each residence certify in writing that they agree to the setback.

10. Wastewater shall be applied only by border strip or flood irrigation as follows:

    a. Application of process wastewater shall only occur where checks are graded to provide uniform water distribution, minimize ponding, and provide complete tailwater control.

    b. Check runs shall be no longer, and slopes shall be no greater, than that which permits uniform infiltration and maximum practical irrigation efficiency.

11. Crops shall be grown on the land application areas. Crops shall be selected based on nutrient uptake capacity, tolerance of anticipated soil moisture conditions, water needs, and

evapotranspiration rates. All crops shall be grazed or they shall be harvested and removed from the irrigation areas at least once per year.

12. Irrigation or impoundment of wastewater shall not occur within 50 feet of any domestic well unless it is demonstrated to the satisfaction of the Executive Officer that a shorter distance is justified.

13. All land application areas shall be managed to prevent breeding of mosquitoes. Specifically:
    a. Ponds and tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation;
    b. Dead algae, vegetation, and debris shall not accumulate on the water surface in ponds.
    c. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface in ponds.
    d. Low pressure and unpressurized pipelines accessible to mosquitoes shall not be used to store wastewater.

D. Solids Disposal Requirements:

1. Collected screenings, sludge, and other solids generated at the processing facility shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.

2. The Discharger's current method of disposal is acceptable to the Executive Officer provided that the disposal site complies with a valid Solid Waste Management Permit issued by the Stanislaus County Department of Environmental Resources or other government agency. Any proposed change in solids use or disposal practice shall be reported to the Executive Officer at least 90 days in advance of the change.

E. Groundwater Limitations:

The discharge, in combination with other sources, shall not cause underlying groundwater to contain any waste constituent at a concentration statistically greater than background water quality.

F. Provisions:

1. The following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described in Provision F.3:

    a. **By 30 June 2002,** the Discharger shall submit a Phase II Tailwater Control and Storage Capacity Certification Report demonstrating that all required tailwater and storm water

controls and setbacks have been constructed in the Brichetto North and Amaral North subareas. The report shall include scaled maps and a narrative description of all control systems in place in the Brichetto North, Brichetto South, Amaral North, and Amaral South subareas. In addition, the report shall include a water balance for the processing facility and all land application areas that the Discharger proposes to use through the end of calendar year 2002. The water balance shall based on as-built storage pond geometry, local climate conditions, and reasonable agronomic application rates, and shall demonstrate adequate storage to ensure compliance with the Prohibitions and Specifications of this Order. If the Amaral Pond has not yet been constructed, the water balance shall clearly indicate the required geometry and capacity of the Amaral Pond; this will serve as the design basis for that pond. Where applicable, the report shall also include a letter from the owner and occupant of each on-site residence that is within ten feet of the limits of any area irrigated with wastewater. The letter shall state that the owner and occupant are aware of the proposed discharge and agree to the proposed setbacks.

b. **By 30 June 2002,** the Discharger shall submit a Groundwater and Vadose Zone Monitoring Workplan prepared in accordance with, and including the items listed in, the first section of Attachment E: *"Monitoring Well Workplan and Monitoring Well Installation Report Guidance."* The workplan shall describe a proposed expansion to the existing groundwater monitoring network specifically designed to ensure that background water quality is adequately characterized and any potential water quality impacts from the discharge are detected at the processing facility and all land application areas. At a minimum, new well locations shall be proposed to monitor upgradient of the processing facility, downgradient of the Aerated Pond, and downgradient of the Amaral Pond. The system shall be designed to yield samples representative of the uppermost portion of the first aquifer underlying the site. The workplan shall also specify design details for lysimeters, proposed soil sampling and vadose zone monitoring locations, and proposed sampling techniques designed to ensure that representative samples of sufficient volume are obtained.

c. **By 30 July 2002,** the Discharger shall submit a Land Application Area Operation and Maintenance Plan for review and approval. The O&M Plan shall be prepared in accordance with Attachment F: *"Land Application Area Operation and Maintenance Plan Guidance"* and shall discuss all aspects of managing the discharge operation to comply with the terms and conditions of this order and how to make field adjustments as necessary to preclude nuisance conditions. A copy of the O&M Plan shall be kept at the facility for reference by operating personnel and they shall be familiar with its contents.

d. **By 30 November 2002,** the Discharger shall submit a Phase III Tailwater Control and Storage Capacity Certification Report demonstrating that all required tailwater and storm water controls and setbacks have been constructed in all subareas (except the Van Dyke C subarea), and that the Amaral Pond has been constructed. The report shall include scaled maps and a narrative description of all control systems in place in each subarea. In addition, the report shall include a water balance for the entire processing facility and all land

application areas based on as-built storage pond geometry, local climate conditions, and reasonable agronomic application rates, and shall demonstrate adequate storage to ensure compliance with the Prohibitions and Specifications of this Order. Where applicable, the report shall also include a letter from the owner and occupant of each on-site residence that is within ten feet of the limits of any area irrigated with wastewater. The letter shall state that the owner and occupant are aware of the proposed discharge and agree to the proposed setbacks.

e. **By 30 December 2002**, the Discharger shall submit a Monitoring Well and Lysimeter Installation Report prepared in accordance with, and including the items listed in, the second section of Attachment E: *"Monitoring Well Workplan and Monitoring Well Installation Report Guidance."* The report shall describe the installation and development of the new monitoring wells and explain any deviation from the approved workplan. It shall include as-built maps and construction details for each lysimeter, and explain any deviation from the approved workplan.

f. **By 30 April 2003**, the Discharger shall submit a Salinity Source Reduction Plan. The report shall describe each unit process that generates wastewater, the estimated daily flow for each separate waste stream, a discussion of the character of each waste stream based on the unit process, and any chemicals used in the process or in the operation of the equipment that may be present in the waste stream. The report shall include calculations of estimated mass loading for fixed dissolved solids for each waste stream and shall discuss the potential for reducing the salinity by reducing or changing chemical additives, changing housekeeping practices, changing the process, and segregation and separate treatment and/or disposal of the waste stream. The report shall specify salinity reduction measures the Discharger has implemented and provide a specific schedule subject to the approval of the Executive Officer for implementation of all additional measures needed to assure full compliance with the Groundwater Limitations of this Order. Full implementation shall be completed by **30 April 2004.**

g. **By 30 May 2003**, the Discharger shall submit a Ranch Pond Freeboard Compliance Report. The report shall discuss operational and structural improvements made to ensure compliance with the freeboard requirements of this Order.

h. **By 30 June 2003**, the Discharger shall submit a Flume Water System Retrofit Report that describes in detail, supplemented by plans and drawings, all improvements to the flume water recycling system that have been made to reduce the potential for odor and groundwater degradation at the processing facility. If the improvements do not include installation of a closed loop recycle system, the report shall demonstrate that the system as built will prevent groundwater degradation and objectionable odors. If the Discharger cannot demonstrate this, then the report shall include a workplan for installation of additional groundwater monitoring well(s) to monitor potential groundwater impacts from the system. The workplan shall be

prepared in accordance with, and include the items listed in, the first section of Attachment E.

i. **By 30 January 2004**, the Discharger shall submit a Background Groundwater Quality Study and Groundwater Impacts Assessment Report. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and comparison of background groundwater quality to that in wells used to monitor the facility. The report shall include at least the following:

- A narrative discussion of the hydrogeology of the processing facility and land application areas, including subsurface stratigraphy, soil infiltration characteristics, depth to groundwater, groundwater gradient, and seasonal gradient variations over the previous five years.
- Groundwater elevation contour maps for each of the preceding eight quarters of monitoring.
- Historical summary data tables for all monitored constituents.
- Concentration vs. time graphs for each constituent listed in the MRP. Each graph shall represent the results for a single constituent, and multiple wells may be plotted on a single graph.
- Definition of site-specific background concentration for each of the constituents listed in the MRP.
- A narrative analysis of spatial and temporal trends for each of the constituents listed in the MRP with respect to established background concentrations.
- An evaluation of monitoring data from background monitoring wells in an appropriate data analysis method as described in Title 27, Section 20415(e)(7-9).
- If any established background concentrations have been exceeded, a specific plan for source control and a corrective action program and time schedule to assure compliance with the Discharge Specifications and Groundwater Limitations of this Order.

j. **At least 60 days before proposed use of the Van Dyke C subarea**, the Discharger shall submit a Final Tailwater Control and Storage Capacity Certification Report demonstrating that all required tailwater and storm water controls have been constructed in the Van Dyke C subarea. The report shall include scaled maps and a narrative description of all control systems and setbacks in place. In addition, the report shall include a water balance for the entire processing facility and all land application areas based on as-built storage pond geometry, local climate conditions, and reasonable agronomic application rates, and shall demonstrate adequate storage to ensure compliance with the Prohibitions and Specifications of this Order.

2. If the Discharger can demonstrate to the satisfaction of the Executive Officer that loading rate limits other than those specified in this Order will not cause or contribute to degradation of

underlying groundwater, or cause any other violation of the terms and conditions of this Order, then this Order may be reopened for consideration of revision of such limits.

For nitrogen, pH, and salinity, the demonstration shall include submittal of a technical report that includes site-specific chemical and physical test data. The data shall be used to support any statements regarding waste character and numerical models used to calculate acceptable loading rates. Numerical models, if used, shall be supported by thorough descriptions of the model, its applicability to the site, limitations of the model, and error analysis. Prior to development of the technical report, the Discharger shall submit a workplan that specifies and justifies the proposed sampling and testing program and modeling approach.

For BOD and nitrogen, the demonstration shall include the submittal of a technical report that describes, at a minimum, the results of a field demonstration project conducted on similar soil types as those in the land application areas and using similar food processing wastewater as that described in Finding No. 23.

3. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geological sciences, shall be prepared by, or under the direction of, persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with section 415 and 3065 of Title 16, CCR, all technical reports, must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

4. The Discharger shall comply with Monitoring and Reporting Program No. R5-2002-0098, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.

5. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

6. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving the land application areas that is used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Regional Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

7. The Discharger shall submit to the Regional Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance

with the specific schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.

8. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.

9. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, then the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.

10. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

11. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel at each land application property shall be familiar with its contents.

12. The Regional Board will review this Order periodically and may revise requirements when necessary.

I, THOMAS R. PINKOS, Acting Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 7 June 2002.

Thomas R Pinkos

THOMAS R. PINKOS, Acting Executive Officer

ALO:6/7/02

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0098

FOR
CONAGRA GROCERY PRODUCTS COMPANY
KEN VAN DYKE, MARCUS HANEY, JILL KAUFMAN-CONNOLLY
JOHN BRICHETTO, AND TONY AMARAL
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

This Monitoring and Reporting Program (MRP) replaces and rescinds MRP No. R5-2002-0808. The Discharger shall comply with this MRP, issued pursuant to Water Code Section 13267, which describes requirements for monitoring industrial process wastewater and groundwater. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

GENERAL POND MONITORING

The Flume Water Recycling Pond, Aerated Pond, Ranch Pond, Settling Basin, Tailwater Ponds A and B, the Brichetto Lagoon, and the Amaral Pond shall be monitored as follows:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm/levee condition	--	Observation	Monthly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

AERATION POND AND RANCH POND INFLUENT MONITORING

Influent samples shall be collected just prior to discharge to the aeration pond or Ranch Pond (grab samples collected from a common pipeline or sump pit after the screening system will be considered representative). At a minimum, the Discharger shall monitor the influent wastewater as follows:

Constituent/Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
pH	pH units	Grab	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Weekly	Monthly
Settleable Solids	ml/L	Grab	Weekly	Monthly
BOD_5 [1]	mg/L	Grab	Weekly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Weekly	Monthly
Nitrate Nitrogen	mg/L	Grab	Weekly	Monthly

[1] 5-day, 20°C Biochemical Oxygen Demand

SETTLING POND AND AMARAL POND EFFLUENT MONITORING

Effluent samples shall be collected from the Settling Pond and Amaral Pond at a point downstream of the inlet to the discharge pipeline that directs flow to the land application areas (grab samples will be considered representative). At a minimum, the Discharger shall monitor the Settling Pond and Amaral Pond effluent as follows:

Constituent/Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
pH	pH units	Grab	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Weekly	Monthly
Settleable Solids	ml/L	Grab	Weekly	Monthly
BOD_5 [1]	mg/L	Grab	Weekly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Weekly	Monthly
Nitrate Nitrogen	mg/L	Grab	Weekly	Monthly

[1] 5-day, 20°C Biochemical Oxygen Demand

FLOW MONITORING

To monitor compliance with the flow limits of the WDRs, the Discharger shall monitor daily flows to the land application areas as follows:

Flow Source	Units	Type of Measurement	Measurement Frequency	Reporting Frequency
Ranch Pond	gpd	Meter Observation	Daily [1]	Monthly
Settling Pond	gpd	Meter Observation	Daily [1]	Monthly
Amaral Pond	gpd	Meter Observation	Daily [1]	Monthly
Each Irrigation Check	gpd, inches	Calculation	Daily [2]	Monthly

[1] Report as total daily flow from the flow source to the land application areas.
[2] Calculated based on total daily flows, flow rates, checks in use, and length of set time for each check.

LAND APPLICATION AREA MONITORING

A. Daily Pre-Application Inspections

The Discharger shall inspect the land application areas at least once daily prior to irrigating, and observations from those inspections shall be documented for inclusion in the monthly monitoring reports. The following items shall be documented for each subarea to be irrigated on that day:

1. Evidence of erosion;
2. Berm condition;
3. Condition of each drop box and flow control structure valve;
4. Proper use of valves (i.e., check to ensure that all affected valves are closed or open as required);
5. Soil saturation;
6. Ponding;
7. Potential runoff to off-site areas;
8. Potential and actual discharge to surface water;
9. Accumulation of organic solids;
10. Soil clogging;
11. Odors that have the potential to be objectionable at or beyond the property boundary; and
12. Insects.

Temperature; wind direction and relative strength; and other relevant field conditions shall be also be observed and recorded. The notations shall also document any corrective actions taken based on observations made. A copy of entries made in the log during each month shall be submitted as part of the Monthly Monitoring Report.

B. Routine Monitoring

The Discharger shall perform the following routine monitoring and loading calculations, and shall present the data in the Monthly and Annual Monitoring Reports.

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Precipitation	0.1 in.	Rain Gauge	Daily	Monthly, Annually
Irrigation subareas and checks receiving wastewater	--	Observation	Daily	Monthly, Annually
Source of wastewater (Ranch Pond, Settling Pond, or Amaral Pond))	--	--	Daily	Monthly, Annually
Hydraulic loading rate	in.	Calculated [1]	Daily	Monthly, Annually
BOD_5 loading rate	lb/ac.	Calculated [1, 2]	Daily	Monthly, Annually
Wastewater nitrogen loading rate	lb/ac.	Calculated [1, 3]	Daily	Monthly, Annually
Nitrogen loading rate, other sources (fertilizer and cattle)	lb/ac.	Calculated [1,4]	Monthly	Monthly, Annually

1 Rate shall be calculated for each irrigation check.

2 BOD_5 shall be calculated using the daily applied volume of wastewater, actual application area, and the average of the three most recent BOD_5 results for the source of the water (i.e., Ranch Pond or Settling Pond).

3 Total nitrogen loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of effluent total nitrogen.

4 Loading rates for nitrogen shall be calculated using the actual load and the application area.

C. Vadose Zone Monitoring

The Discharger shall install a vadose zone monitoring system within the Brichetto North and Van Dyke B subareas.

The monitoring system shall consist of pan lysimeters designed to sample soil pore liquid or infiltrate at a depth of five feet below ground surface at each sampling location. For each subarea designated above, a minimum of two lysimeters shall be installed in different irrigation checks at locations designed to represent a "worst case" scenario (e.g., in locations that tend to infiltrate faster or those potentially subject to tailwater ponding) of the check. The lysimeters shall be designed to provide sufficient sample volume to perform the analytical testing program specified below, and shall be completely purged after each sampling event.

As described in the Provisions section of this Order, the Discharger shall propose the type and locations, as well as methods to be used to purge and sample the lysimeters. These techniques shall be implemented upon approval of the Executive Officer. Lysimeter samples shall be analyzed using standard EPA methods. The vadose zone monitoring program shall consist of at least the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Dates of Purging and Sampling	--	--	Second and fourth quarters
Volume Purged Before Sampling [1]	mL	--	Second and fourth quarters
Volume Removed After Sampling [1]	mL	--	Second and fourth quarters
pH	--	Grab	Second and fourth quarters
Total Nitrogen	mg/L	Grab	Second and fourth quarters
Total Dissolved Solids	mg/L	Grab	Second and fourth quarters
Inorganic (Fixed) Dissolved Solids	mg/L	Grab	Second and fourth quarters
Chloride	mg/L	Grab	Second and fourth quarters
Iron	mg/L	Grab	Second and fourth quarters
Manganese	mg/L	Grab	Second and fourth quarters

[1] The lysimeter must be completely drained.

D. Annual Soil Sampling

The Discharger shall establish permanent representative soil monitoring locations within the land application areas as follows: three background locations outside of the land application areas, six locations within the Northern Area, and twelve locations within the Southern Area. Sampling locations shall be distributed to be representative of each subarea and predominant soil type. At least one soil sampling location shall be near each lysimeter. Soil samples shall be collected from each sampling location at the following depth intervals: 2 to 3 feet, 4 to 5 feet, and 8 to 9 feet below the ground surface. Each 12-inch sample shall be thoroughly mixed to create a composite sample representative of the depth interval, and shall be analyzed as follows:

Constituent/Parameter	Units	Sampling and Reporting Frequency [3]
Soil Classification (USCS and USDA)	--	Annually
Total Solids	% total weight	Annually
Total Alkalinity [1]	mg/Kg as $CaCO_3$	Annually
pH	pH Units	Annually

Constituent/Parameter	Units	Sampling and Reporting Frequency [3]
Cation Exchange Capacity [1]	meq/100 grams	Annually
Nitrate+Nitrite Nitrogen [1, 2]	mg/Kg, mg/L	Annually
Total Kjeldahl Nitrogen [1, 2]	mg/Kg, mg/L	Annually
Total Nitrogen [1, 2]	mg/Kg, mg/L	Annually
Total Dissolved Solids [1,2]	mg/Kg, mg/L	Annually
Chloride [2]	mg/L	Annually
Iron [2]	mg/L	Annually
Manganese [2]	mg/L	Annually

1 To be reported on a dry weight basis; show calculations.

2 Analysis shall be performed on the extract obtained from the Waste Extraction Test using distilled water as the extractant.

3 Samples shall be collected at the same time the lysimeters are sampled in the spring (second quarter) or fall (fourth quarter). Sampling must occur at the same time each year.

GROUNDWATER MONITORING

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent/Parameter	Units	Sample Type	Sampling and Reporting Frequency
Depth to Groundwater	feet	Measurement	Quarterly
Groundwater Elevation [1]	feet	Calculated	Quarterly
Gradient Magnitude	feet/feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
pH	pH Units	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly

Constituent/Parameter	Units	Sample Type	Sampling and Reporting Frequency
Nitrate Nitrogen	mg/L	Grab	Quarterly
Dissolved Iron [2]	mg/L	Grab	Quarterly
Dissolved Manganese [2]	mg/L	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly

[1] Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

[2] Samples shall be filtered with a 0.45-micron filter prior to sample preservation.

SURFACE WATER MONITORING

The Discharger shall establish at least six permanent surface water sampling stations along the Van Dyke, Bancroft, and Cavill Drains as follows:

1. SW-1 shall be in the Cavill Drain upstream of the Kaufman-Connolly subarea (on the east side of the eastern property boundary);
2. SW-2 shall be in the Van Dyke Drain upstream of Tailwater Pond A;
3. SW-3 shall be approximately 10 feet downstream of the confluence of the Van Dyke and Cavill Drains (on the west side of the Van Dyke property boundary). If the landowner refuses access to the site, the sampling site may be relocated to the nearest upstream point on the Cavill Drain that is on public property or on land owned by the Discharger.
4. SW-4 shall be in the Cavill drain immediately upstream of the Southern Area (on the north side of the Amaral property boundary);
5. SW-5 shall be in the Bancroft Drain immediately upstream of the flow control structure; and
6. SW-6 shall be in the Cavill Drain immediately downstream of the Southern Area (on the west side of the Brichetto property boundary).

Surface water samples shall be collected and analyzed using standard EPA methods. Surface water monitoring shall include, at a minimum, the following:

Constituent/Parameter	Units	Sample Type	Sampling and Reporting Frequency [1,2]
PH	pH units	Grab	Monthly
BOD_5	mg/L	Grab	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly

Constituent/Parameter	Units	Sample Type	Sampling and Reporting Frequency [1, 2]
Volatile Dissolved Solids	mg/L	Grab	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly
Nitrate Nitrogen	mg/L	Grab	Monthly

1 During the primary irrigation season (June through October), sampling shall be coordinated with irrigation to allow sampling on a day when tailwater is present in the Van Dyke and Bancroft Drains. During the rainy season (November through May), sampling shall be coordinated with precipitation to allow sampling of storm water runoff.

2 Samples from the Northern Area (SW-1, SW-2, and SW-3) shall be taken on the same day. Samples from the Southern Area (SW-4, SW-5, and SW-6) shall also be taken on the same day, but need not be taken on the same day as samples from the Northern Area, except during storm water runoff events, when all samples shall be taken on the same day.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g. influent, effluent, soil, groundwater), sampling location, and the reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a California-registered geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e., the January report is due by 1 March). At a minimum, the reports shall include:

1. Results of pond, influent, effluent, surface water and land application area monitoring. Data shall be presented in tabular format.

2. Daily precipitation data in tabular form accompanied by starting and ending dates of irrigation for each subarea and surface water sampling dates.

3. Daily pre-application subarea inspection reports.

4. A comparison of monitoring data to the discharge specifications and applicable limitations and an explanation of any violation of those requirements.

5. When requested by staff, copies of laboratory analytical report(s).

6. Calibration log(s) verifying calibration of any field monitoring instruments (e.g., DO, pH, and EC meters) used to obtain data.

7. Daily discharge volumes and acres irrigated shall be tabulated, and the report shall include a discussion of the discharge volumes and irrigation practices used (method of application, application period/duration, drying times, etc.) for each check or group of checks utilized during the month. Hydraulic loading rates (inches/acre/month) shall be calculated.

8. Maximum daily BOD_5 loading rates (lbs/acre/day) shall be calculated for each irrigation check using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD_5 for the applicable source water, which also shall be reported along with supporting calculations. Average BOD_5 loading rates shall be calculated using the total volume applied on the day of application, the total application period (i.e.: day of application and drying time), estimated application area on the day of application, and a running average of the three most recent results of BOD_5 for the applicable source water.

9. Total nitrogen loading rates (lbs/acre/month) shall be calculated for each irrigation check on monthly basis using the daily applied volume of wastewater, estimated daily application area, and the most recent results of total nitrogen, which shall also be reported along with supporting calculations.

10. Nitrogen loading rates for other sources (i.e., fertilizers and cattle waste) shall be calculated for each irrigation check on a monthly basis using the daily applied load and the estimated daily application area.

11. Cumulative nitrogen loading rates for each irrigation check for the calendar year to date shall be calculated as a running total of monthly loadings to date from wastewater, supplemental fertilizers, and livestock.

B. Quarterly Groundwater and Vadose Zone Monitoring Reports

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Report shall include the following:

1. Results of groundwater monitoring and vadose zone monitoring (when applicable).

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any. Flow directions and gradients shall be determined for the processing facility, the Northern Area, and the Southern Area.

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).

5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements.

6. Summary data tables of historical and current water table elevations and analytical results.

7. When applicable (i.e., for the second and fourth quarterly reports):

    a. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for vadose zone monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs documenting purging and sampling activities.

    b. A narrative discussion of the analytical results for all vadose zone monitoring locations, including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).

    c. A comparison of monitoring data to applied effluent quality and the groundwater limitations.

    d. Summary data tables of historical and current vadose zone analytical results.

8. A scaled map showing relevant structures and features of the facility, the land application area and irrigation check boundaries, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.

9. Copies of laboratory analytical report(s) for groundwater and vadose zone monitoring.

C. Annual Report

An Annual Report shall be submitted to the Regional Board by **1 February** of each year. The Annual Report shall present a summary of all monitoring data obtained during the previous calendar year, and shall include the following. The Annual Report may also include the contents of the 4th Quarterly Monitoring Report.

1. Tabular and graphical summaries of all data collected during the year with data arranged to confirm compliance with the WDRs.

2. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD, total nitrogen, and total dissolved solids.

3. A narrative description of the annual vadose zone and soil monitoring program and a map of sampling locations.

4. A mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations. The report shall describe the types of crops planted and dates of planting and harvest for each crop.

5. Tabular and graphical summaries of historical infiltrate and soil analytical results for all monitored constituents and parameters.

6. An evaluation of soil and soil pore liquid monitoring data based on current and historical data including evidence of waste constituent migration, the effectiveness of land treatment, potential for groundwater degradation, recommendations for operational modifications to reduce waste constituent migration, and adequacy of the monitoring program to provide early detection of potential groundwater quality degradation.

7. An evaluation of the performance of the pretreatment system and land application sites.

8. Estimated monthly flows for the next calendar year.

9. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection, including consideration of application management practices (i.e.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), soil profile monitoring data and groundwater monitoring data.

10. An evaluation of the groundwater quality at the processing facility and land application areas.

11. A narrative description of solids disposal practices, including the name and contact information for each disposal facility and the quantity disposed.

12. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.

13. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

14. For each land application subarea identified in the WDRs, submit the following information regarding the current landowner agreement: date of execution, date of expiration, signatory parties, names and phone numbers of persons responsible for managing irrigation and discharge controls at the property.

15. For each on-site residence where wastewater is applied with 50 feet of any occupied structure, provide letters from the property owner and occupant (if not owner-occupied) stating that the current setbacks are acceptable. If there has been no change in occupancy or ownership since the previous annual report, the Discharger shall so state, but need not re-submit the letters.

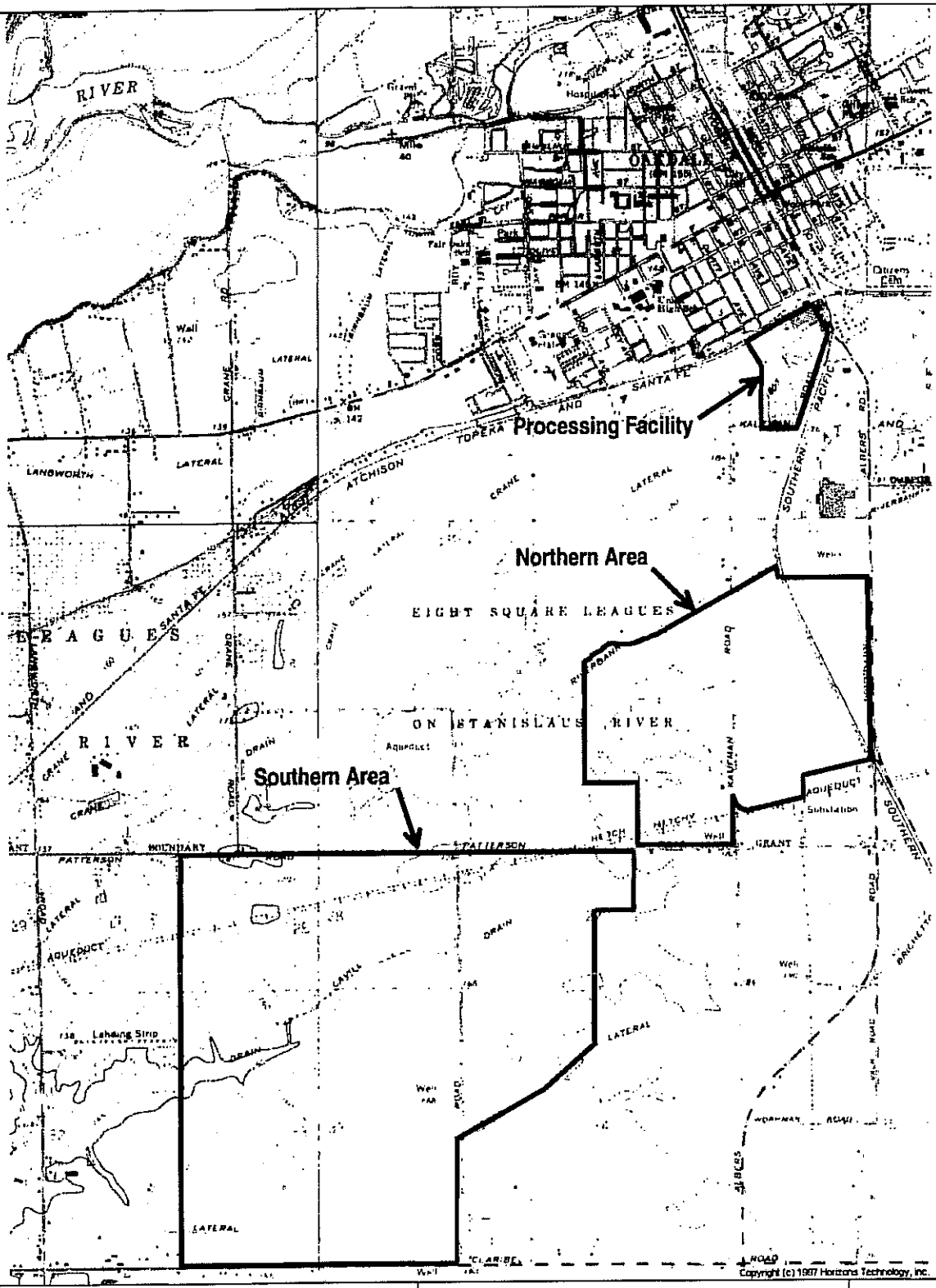
The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: Thomas R Pinkos
THOMAS R. PINKOS, Acting Executive Officer

7 June 2002
(date)

ALO:6/7/02

ATTACHMENT A



Reference:
U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLES:
OAKDALE, ESCALON, RIVERBANK, AND WATERFORD
Revised 1953

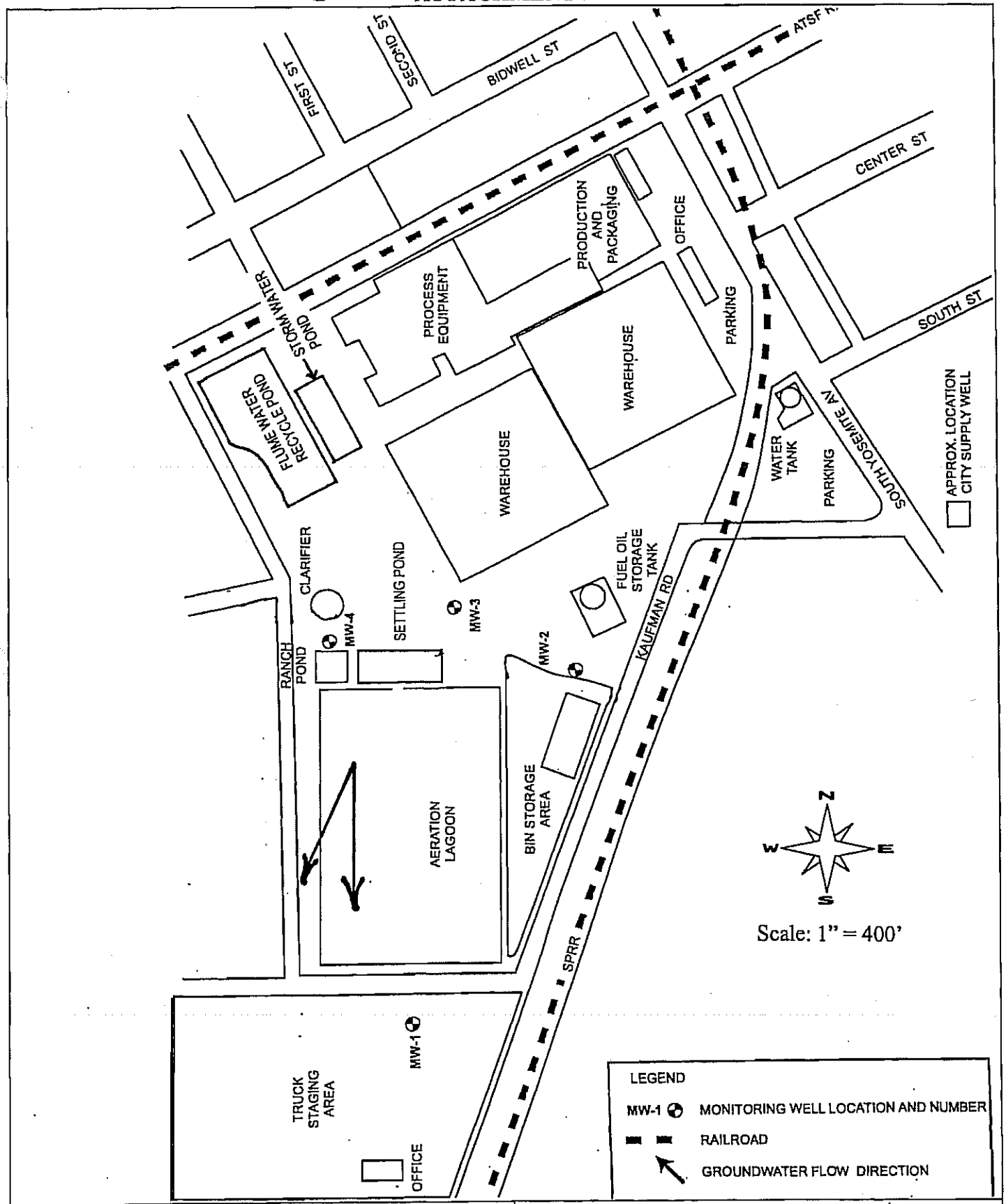
SITE LOCATION MAP
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

ORDER NO. R5-2002-0098

N
W E
S

approx. scale
1 in. = 3,000 ft.

ATTACHMENT B

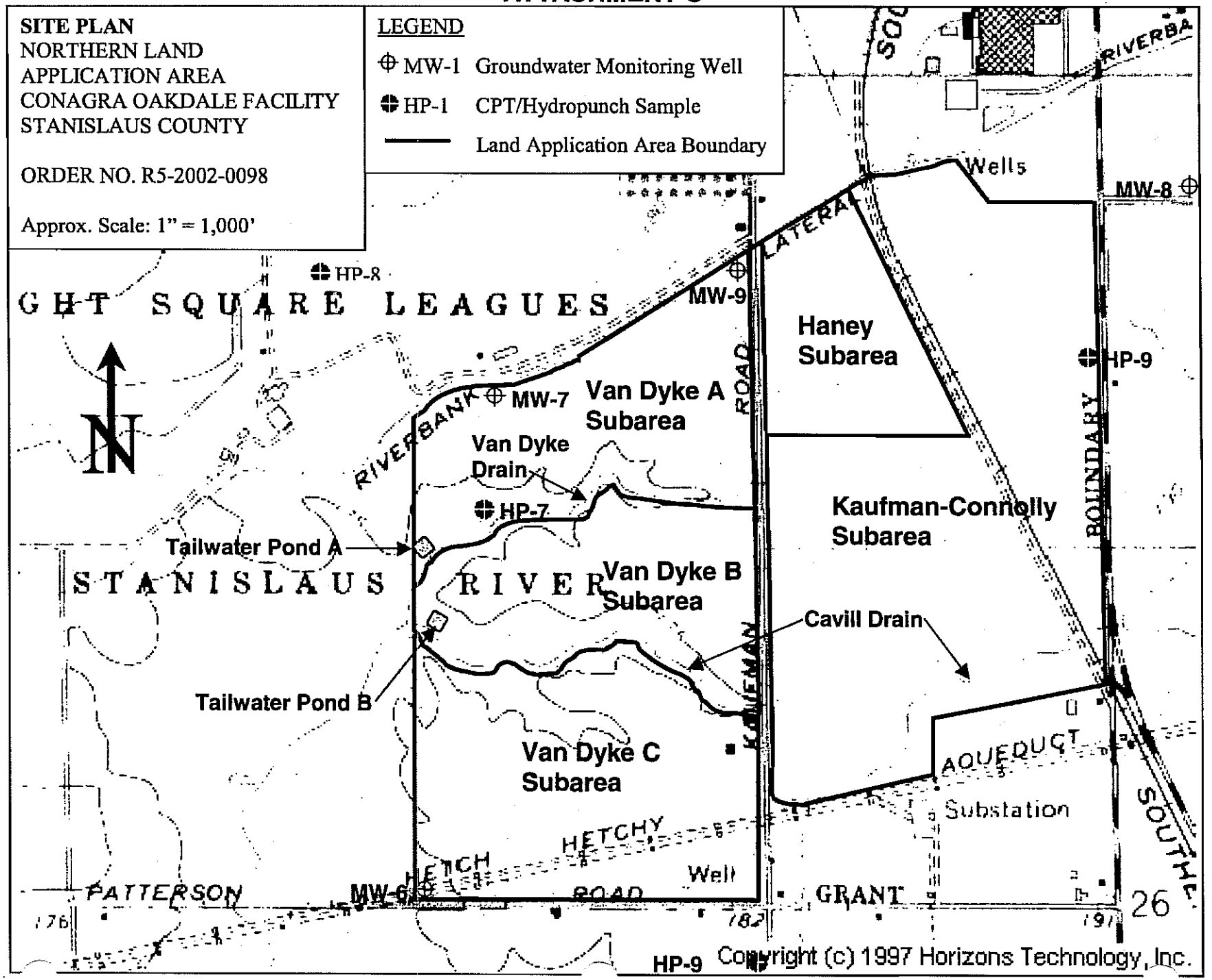


Reference:
Brown and Caldwell
Final 3rd Quarter 2001 Groundwater Monitoring Report, October 2001

PROCESSING FACILITY SITE PLAN
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

ORDER NO. No. R5-2002-0097

ATTACHMENT C



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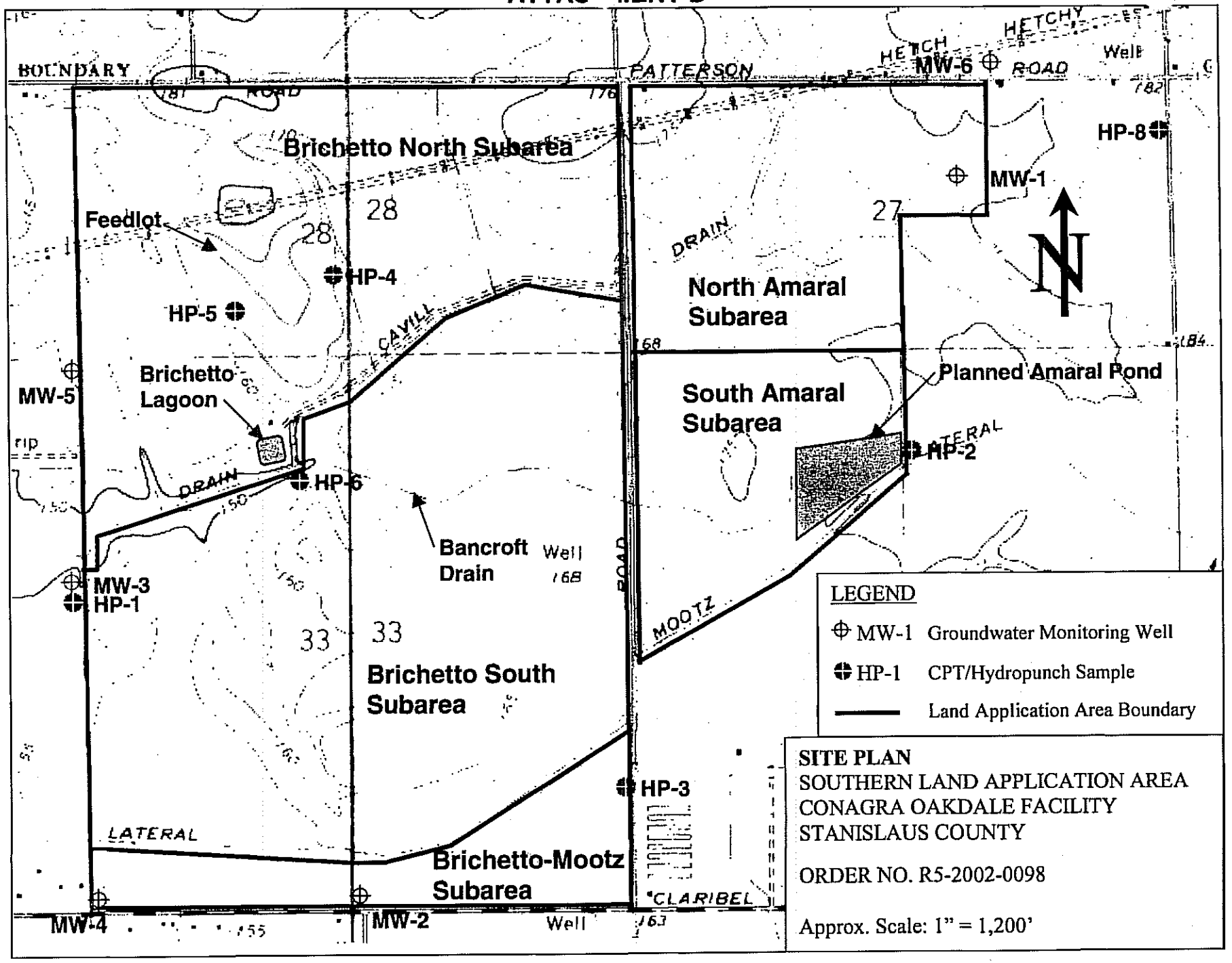
BOUNDARY ROAD
PATTERSON ROAD
HETCH HETCHY
MW-6
Well
HP-8
MW-1
Brichetto North Subarea
Feedlot
28
HP-4
HP-5
CAVILL
DRAIN
North Amaral Subarea
27
N
MW-5
Brichetto Lagoon
68
Planned Amaral Pond
South Amaral Subarea
HP-2
LATERAL
DRAIN
HP-6
Bancroft Drain
Well
MW-3
HP-1
33
Brichetto South Subarea
MOOTZ
ROAD
HP-3
LATERAL
Brichetto-Mootz Subarea
CLARIBEL
MW-4
MW-2
Well
LEGEND
MW-1 Groundwater Monitoring Well
HP-1 CPT/Hydropunch Sample
Land Application Area Boundary
SITE PLAN
SOUTHERN LAND APPLICATION AREA
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY
ORDER NO. R5-2002-0098
Approx. Scale: 1" = 1,200'

ATTACHMENT E

ORDER NO. R5-2002-0098

MONITORING WELL WORKPLAN AND MONITORING WELL INSTALLATION REPORT GUIDANCE
CONAGRA GROCERY PRODUCTS COMPANY
KEN VAN DYKE, MARCUS HANEY, JILL KAUFMAN-CONNOLLY
JOHN BRICHETTO, AND TONY AMARAL
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing at least the information listed below. Following installation of the monitoring wells, the Discharger shall submit a report of results, as described below. All workplans and reports must be prepared under the direct supervision of, and signed by, a geologist registered by the State of California.

Monitoring Well Installation Workplan

A. General Information:
   - Proposed monitoring well locations and rationale for location selection
   - Equipment decontamination procedures
   - Topographic map showing any existing monitoring wells, proposed wells, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details: describe proposed drilling and logging methods

C. Monitoring Well Design:
   - Casing diameter
   - Borehole diameter
   - Depth of surface seal
   - Well construction materials
   - Diagram of well construction
   - Type of well cap
   - Size of perforations and rationale
   - Grain size of sand pack and rationale
   - Thickness and position of bentonite seal and sand pack
   - Depth of well, length and position of perforated interval

D. Well Development:
   - Method of development to be used
   - Method of determining when development is complete
   - Method of development water disposal

E. Surveying Plan: discuss how each well will be surveyed to a common reference point.

F. Well Sampling:
- Minimum time after development before sampling (48 hours)
- Well purging method and amount of purge water
- Sample collection and preservation method
- QA/QC procedures

G. Water Level Measurement:
- The elevation reference point at each monitoring well shall be within 0.01 foot.
- Ground surface elevation at each monitoring well shall be within 0.1 foot.
- The method and time of water level measurement shall be specified.

H. Proposed time schedule for well installation and development.

Monitoring Well Installation Report

A. Well Construction:
- Number and depth of wells drilled
- Date(s) wells drilled
- Description of drilling and construction
- Approximate locations relative to facility site(s)
- A well construction diagram for each well must be included in the report, and should contain the following details:
  - Total depth drilled
  - Depth of open hole (same as total depth drilled if no caving occurs)
  - Footage of hole collapsed
  - Length of slotted casing installed
  - Depth of bottom of casing
  - Depth to top of sand pack
  - Thickness of sand pack
  - Depth to top of bentonite seal
  - Thickness of bentonite seal
  - Thickness of concrete grout
  - Boring diameter
  - Casing diameter
  - Casing material
  - Size of perforations
  - Number of bags of sand
  - Well elevation at top of casing
  - Depth to ground water
  - Date of water level measurement
  - Monitoring well number
  - Date drilled
  - Location

B. Well Development:
   Date(s) of development of each well
   Method of development
   Volume of water purged from well
   How well development completion was determined
   Method of effluent disposal
   Field notes from well development should be included in report.

C. Well Survey Data: provide reference elevations for each well and surveyor's notes

D. Water Sampling:
   Date(s) of sampling
   How well was purged
   How many well volumes purged
   Levels of temperature, EC, and pH at stabilization
   Sample collection, handling, and preservation methods
   Sample identification
   Analytical methods used
   Laboratory analytical data sheets
   Water level elevation(s)
   Groundwater contour map

E. Explanation of any deviation from the approved workplan.

ATTACHMENT F

ORDER NO. R5-2002-0098

GUIDANCE FOR LAND APPLICATION AREA
OPERATION AND MAINTENANCE PLAN
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

The purpose of the land Application Area Operation and Maintenance Plan (O&M Plan) is to provide rules of operation to all concerned parties, including the generator of the waste, the land application area landowner, and employees of any party who will have a role in day-to-day operation of the system. At a minimum, the O&M Plan shall include the following:

1. Background Information
   - The operating history of the processing facility, the wastewater management system, and the land application areas
   - Discussion of the character of the process wastewater with respect to potential odor problems and groundwater impacts, including seasonal variability:
     - Ranch Pond – BOD, nitrogen, TDS
     - Aerated Lagoon – BOD, nitrogen, TDS
   - Historical and projected wastewater generation rates, including seasonal variability

2. Principles of Land Application of Waste
   - General principles of land treatment and disposal for organic wastes
   - Identification of key factors influencing the ability of the system to handle permitted loading rates
   - Causes of, and prevention/control measures for, odor problems

3. Waste Discharge Requirements
   - A summary of key elements of the WDRs, the associated Monitoring and Reporting Program (MRP), and the Standard Provisions and Reporting Requirements

4. Operation, Monitoring, and Reporting Responsibilities
   - An organization description and/or chart depicting all persons involved with management, operation, maintenance and monitoring of the wastewater system and land application areas, including their direct role and reporting responsibilities

5. Operations
   - A detailed description of specific operating procedures for each land application subarea, including:
     - wastewater application
     - field rotation
     - assessing readiness of the field to receive waste
     - specific procedures for managing and controlling tailwater and storm water
   - The location, type, and operational procedures for each flow meter (a schematic diagram of locations is acceptable)
   - Specific procedures and documentation requirements for setting up systems to release storm water to the Cavill Drain, including timing of irrigation events with respect to precipitation events, how managers will determine when storm water may

be released, how this will be communicated to operations personnel, and how managers will ensure that tailwater is not accidentally released to the Cavill Drain.
- fertilizer usage.

6. Maintenance
   - A detailed description of all equipment and site improvements associated with wastewater disposal, including design basis, site plans, mechanical systems description, piping and instrumentation description and diagrams
   - Required runoff controls (narrative description and grading/drainage plan, including all berms, ditches, and other improvements needed to contain runoff and tailwater).
   - Routine tailwater management practices (narrative description supplemented with drainage plan)
   - Tailwater/storage ponds
     - Describe aeration systems, if used
     - Describe procedures and documentation requirements for:
     - Inspections
     - Maintenance/repairs
   - Structural runoff controls
     - Describe procedures and documentation requirements for:
     - Inspections
     - Maintenance/repairs
   - Routine equipment maintenance, calibration procedures, and troubleshooting procedures; Coordination between ConAgra and Landowner
   - Describe how the landowner and ConAgra will coordinate wastewater delivery, track information required for monthly monitoring reports, and ensure compliance with loading rate limitations imposed by the waiver.
   - Application cycles
     - application duration
     - resting period
     - variations due to weather constraints
   - Odor prevention and control
   - Describe best management practices to be employed to prevent nuisance odors emanating from the pasture and any storage/tailwater ponds.

7. Monitoring and Reporting
   - Monitoring procedures
   - Sampling procedures
   - Sample handling and storage
   - Use of field operations documentation logs
   - Report development
   - Emergency notification and action procedures in the event of imminent or actual violations of the WDRs

- Quality assurance program to ensure that all calculations and monitoring reports are reviewed and certified by the appropriate persons

INFORMATION SHEET

ORDER NO. R5-2002-0098
CONAGRA GROCERY PRODUCTS COMPANY
KEN VAN DYKE, MARCUS HANEY, JILL KAUFMAN-CONNOLLY
JOHN BRICHETTO, AND TONY AMARAL
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

ConAgra Grocery Products Company's Oakdale processing facility processes tomatoes and beans year-round. An average of 4.4 mgd of wastewater is generated during the tomato fresh pack season (July through mid-October), with peak flows of 6.0 mgd. During the tomato remanufacturing season (mid-October through June), average daily flows are approximately 0.9 mgd, and peak flows are about 2.0 mgd. Process wastewaters are screened to remove gross solids using rotary screens.

During the fresh pack season, screened wastewater is discharged into either the Aerated Pond or the Ranch Pond. The Aerated Pond receives an average flow rate of 1.7 mgd, and is designed for treatment, storage, and discharge to the land application areas as the weather permits. The Ranch Pond, which receives an average flow of 2.7 mgd during the fresh pack season, is used as a transfer point for conveying wastewater to the land application areas. Waste solids from all process streams are discharged into hoppers below the screen system, and ultimately are taken off-site for disposal.

Currently, wastewater from the Aerated Pond and the Ranch Pond is used to irrigate cattle pasture in the Northern Area, which comprises five discrete irrigation subareas:

1. The Haney subarea (62 gross acres);
2. The Kaufman-Connolly subarea (179 gross acres); and
3. The Van Dyke property, which is comprised of three separate subareas: Van Dyke A (74 gross acres), Van Dyke B (61 gross acres), and Van Dyke C (76 gross acres).

The Northern Area is irrigated by the border strip method of irrigation. Currently, tailwater and storm water flow into either the Van Dyke Drain or the Cavill Drain; this discharge is regulated under an NPDES permit. The Cavill Drain originates east of the Northern Area and also carries tailwater and runoff from upgradient agricultural land. The Van Dyke Drain is tributary to the Cavill Drain and originates on the Van Dyke Property.

ConAgra plans to eliminate all surface water discharge points in the Northern Area and expand the land application areas to include an additional 1,216 acres (the Southern Area), which comprises the 925-acre Brichetto Ranch and the 291-acre Amaral Ranch. The Discharger proposes to enlarge Tailwater Pond A in the Northern Area to provide additional tailwater storage capacity. The Van Dyke Drain will be used to convey tailwater to the pond during the irrigation season and storm water to the Cavill Drain during the rainy season. To eliminate tailwater discharges to the Cavill Drain, the Discharger will construct a flow diversion structure in the Van Dyke Drain to direct flows to either Tailwater A or the Cavill Drain. The Discharger also proposes to enlarge Tailwater Pond B. An earthen berm and subsurface drainage pipe will be constructed along the northern side of the Cavill Drain within the Northern Area. A similar berm and subsurface drain system drop boxes will be constructed along the southern side of the Cavill Drain.

Under current site conditions, tailwater and/or contaminated storm water runoff from the Northern Area could discharge into the Van Dyke and Cavill Drains. Therefore, this Order prohibits discharge to the Northern Area until the all the required improvements are constructed and the Discharger submits as-built

tailwater control system drawings to demonstrate that the improvements have been constructed and a revised water balance that demonstrates adequate tailwater storage capacity.

The planned Southern Area is divided into five discrete irrigation subareas, which are defined by irrigation canals and drains that traverse the property:

1. The Brichetto North subarea (348 gross acres);
2. The Brichetto South subarea (488 gross acres);
3. The Brichetto-Mootz subarea (89 gross acres);
4. The Amaral North subarea (234 gross acres); and
5. The Amaral South subarea (67 gross acres).

The Southern Area will be irrigated with wastewater from the Ranch Pond and Aerated Pond by the border strip method of irrigation. In general, drainage is to the nearest agricultural drain (i.e., the Bancroft or Cavill Drain). Portions of the South Brichetto subarea that would ordinarily drain directly into the Cavill Drain have been retrofitted with a subsurface drain system that returns tailwater to the Brichetto Lagoon, but allows selective release of runoff directly into the Cavill Drain. This tailwater return system serves the South Brichetto and South Amaral subareas only.

The Bancroft drain converges with the Cavill Drain near the Brichetto Lagoon, and there is a concrete flow control structure at that point with separate valves to direct flows into either the Brichetto Lagoon or the Cavill Drain. The Discharger will use the Bancroft Drain to convey tailwater generated during the irrigation season (typically mid-March through November) to the Brichetto Lagoon. A new storage lagoon (the Amaral Pond) will be constructed in the southeast corner of the South Amaral subarea to store excess tailwater from the tailwater ponds in the Northern Area, excess wastewater from the processing facility, and excess tailwater from the Brichetto Lagoon. Water stored in the Amaral Pond will be recycled for irrigation.

The required wastewater distribution and tailwater management systems have yet to be constructed to serve the Brichetto North, Brichetto-Mootz, and Amaral North subareas. This Order therefore prohibits land application to these subareas until the all the required improvements are constructed and the Discharger submits as-built tailwater control system drawings to demonstrate that the improvements have been constructed and a revised water balance that demonstrates adequate tailwater storage capacity.

To protect surface water quality, this Order places strict limits on the timing of storm water releases with respect to irrigation and precipitation events. The derivation of these limits is discussed further below. The Discharger submitted a water balance with the RWD that indicates there will be adequate land disposal capacity to accommodate the proposed monthly flow rates. However, the water balance was inadequate because it did not account for flows into and out of treatment and storage ponds. This analysis is essential to show that the facility provides adequate storage capacity to ensure compliance with the freeboard and agronomic water use requirements. This Order therefore requires that the Discharger resubmit the water balance and final design documentation for new and/or improved storage ponds to demonstrate that these criteria will be satisfied. The Discharger is also required to bring all permitted land application areas into service within a specified timeframe to ensure application rates are not excessive,

and the flow limits are structured to allow flows to increase commensurate with land application area availability.

Based on groundwater monitoring data submitted by the Discharger, there is some evidence of groundwater degradation at the processing facility and the existing land application area (the Northern Area). Therefore, this Order requires that the Discharger install additional monitoring wells at the processing facility and implement a more extensive groundwater monitoring program to determine applicable background concentrations and whether the discharge has degraded groundwater beneath the processing facility and the Northern Area. Additional groundwater monitoring wells are also required to monitor directly downgradient of the planned Amaral Pond. The Discharger is also required to perform soil and vadose zone monitoring.

Staff's derivation of certain Discharge Specifications and Limitations contained in this Order is discussed below.

Discharge Prohibition A.5 and Land Application Area Specifications C.2 and C.3
This prohibition restricts use of the Van Dyke and Bancroft Drains for conveying tailwater to tailwater ponds and restricts the release of storm water runoff to the Cavill Drain through these tributaries. These restrictions are necessary to protect surface water quality in the Cavill Drain, which might be degraded by release of storm water runoff from areas recently irrigated with wastewater and drains that have recently conveyed tailwater that contains waste constituents.

Land Application Area Specifications C.2 sets forth the specific circumstances under which the Discharger may release runoff to the Cavill Drain. First, storm water may not be released to the Cavill Drain until the mass of BOD applied during the last irrigation event divided by the number of days since the last irrigation event is less than 100 pounds per acre per day. This requirement is based on studies completed by the US EPA that show the typical oxidation capacity of land treatment units is 100 pounds per acre per day. This requirement is structured to ensure that all readily degradable constituents have been adequately oxidized before runoff is released. Second, storm water release is not permitted until either: a) a small precipitation event sufficient to generate significant infiltration has occurred, or b) a precipitation event that generates a first flush of runoff has occurred and the runoff has been captured and stored in a tailwater pond.

The specific timing and precipitation amounts specified were developed by the Discharger's engineering consultant based on calculations of the time of runoff concentration for the longest tributary flow path in each discharge area (typically less than six hours), and the surface conditions present at the site (slope, vegetation, and soil type). The time of concentration was multiplied by a factor of safety to arrive at the specified time criteria.

As a further measure to protect surface water quality (and ensure agronomic water usage), Land Application Area Specification C.3 prohibits application of wastewater when precipitation is expected to occur within 24 hours, during precipitation, and within 24 hours after a precipitation event.

Discharge Specifications B.1 and B.2
These Discharge Specifications prescribe limits for average daily and peak daily discharge of process

wastewater to the land application areas. These limits are based on the RWD and the current discharge. If the Northern Area and the unimproved portions of the Southern Area are not retrofitted as required, and/or if the Discharger fails to construct the additional storage capacity in a timely fashion, the Discharger will be forced to either curtail production or over-apply wastewater to the South Brichetto and South Amaral subareas. Therefore, Provisions F.1.a and F.1.d require that the Discharger certify completion of the required improvements by the end of 2002 as proposed by the Discharger.

Discharge Specification B.3

Loading limits for BOD are needed because excessive loading can deplete soil oxygen and cause anaerobic conditions. Anaerobic degradation of organic matter can cause severe nuisance odors and promote incomplete biodegradation, thereby allowing dissolved organic material to percolate through the unsaturated zone into groundwater. Anaerobic decomposition of organic wastes also creates organic acids that decrease soil pH. A low pH environment can cause excessive leaching of metals in the soil into underlying groundwater.

This Discharge Specification prescribes a maximum BOD loading of 800 lbs/acre on any one day, and 100 lbs/acre/day as a 7-day (weekly) average. The weekly average loading limit of 100 lbs/acre/day is based on U.S. Environmental Protection Agency Publication (USEPA) guidelines provided in *Pollution Abatement in the Fruit and Vegetable Industry – Wastewater Treatment* (USEPA 625/3-77-0007) (hereafter Pollution Abatement). The maximum daily loading limit is based the fact that slow-rate land treatment systems (i.e., crop irrigation) with BOD loading rates that occasionally exceed 300 lbs/acre/day have successfully avoided odor problems by using adequate drying times between applications (Sherwood C. Reed, et al., *Natural Systems for Waste Management and Treatment*). Because of the site topography, the type of irrigation system, and the character of the wastewater, the BOD loading rate will be as high as 800 pounds per acre per day during the fresh pack season. Cycle times will be at least 8 days, which should provide adequate time for oxidation and infiltration between irrigation events to prevent odors. However, in recognition that certain weather conditions can exacerbate the potential for odors, Discharge Specification B.3 also requires that the BOD loading rate used will ensure that the discharge does not cause objectionable odors or degrade water quality.

Discharge Specification B.4

This Discharge Specification prescribes nutrient loading limits for the disposal site. It limits nitrogen loading to the agronomic rate for the type of cropping proposed by the Discharger. Limiting total nitrogen loading to the agronomic rate for the crop ensures that all available nitrogen is taken up by the crop and not available to leach to the water table. Because there is no site-specific data to determine the denitrification potential in the vadose zone, staff have selected a conservative approach which is based on the assumption that 100% of the total nitrogen applied is ultimately available for plant uptake or leaching. This approach is appropriate until the Discharger completes a more definitive study of groundwater quality and site-specific nitrogen uptake rates.

Discharge Specification B.7

To prevent anaerobic conditions and associated odor problems in the treatment and storage ponds, the Regional Board has usually required that the dissolved oxygen content in the upper 12 inches of any liquid impoundment be maintained at no less than 1.0 mg/L. Discharge Specification B.7 imposes this

requirement with one provisional exception: the Brichetto Lagoon. The exception is justified by the following:

1. The Brichetto Lagoon serves as a facultative lagoon for feedlot runoff during the winter. This type of system results in low dissolved oxygen levels. The lagoon will be drained each spring to receive tailwater flows;
2. During the irrigation season, tailwater flowing into the lagoon should be well-oxidized by overland flow and is constantly recirculated into the irrigation system; and
3. The lagoon is located approximately 2,000 feet from the nearest property boundary.

Other specifications prohibit nuisance odors, and these specification will be enforced as necessary with regard to the Brichetto Lagoon.

Discharge Specification B.5 and Land Application Area Specification C.8
Discharge Specification B.5 requires that the pH of the discharge remain between 6.5 and 8.5 to ensure proper soil pH for optimal wastewater treatment and crop growth. *Pollution Abatement* recommends a pH range of 6.4 to 8.4 for irrigation. This limitation alone cannot ensure that soil pH conditions will be optimal for land treatment and preventing leaching of metals, so Land Application Area Specification C.8 requires that the discharge not exceed the soil pH buffering capacity.

Discharge Specification B.16
This Discharge Specification requires that the Discharger implement Best Practicable Treatment and Control, (BPTC) to minimize the salinity of the wastewater. This specification is necessary to ensure that salt constituents can be assimilated by the soil column without adversely affecting use of the land as irrigated pasture or causing groundwater degradation.

Other Technical Reports Required by the Provisions
The Discharger is required to submit a detailed Land Application Area Operation and Maintenance Plan to ensure that all persons responsible for irrigation and monitoring are aware of their responsibilities and are appropriately trained. This is necessary because there are several landowners involved, ConAgra has limited control over their day-to-day operations, and communication between each co-discharger and ConAgra is essential to compliance with this Order.

Both soil pore liquid and soil testing are required regularly to demonstrate that waste constituents are not accumulating in the soil column or moving though the pore liquid at concentrations that threaten groundwater quality.

ALO:7-Jun-02

California Regional Water Quality Control Board
Central Valley Region
Robert Schneider, Chair

V n H. Hickox
Secretary for Environmental Protection

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12 December 2003

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Mr. Gus Swanson, Plant Manager
ConAgra Grocery Products Company
554 South Yosemite Avenue
Oakdale, CA 95361

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2002-0098, CONAGRA OAKDALE FACILITY, STANISLAUS COUNTY

Enclosed is Revised Monitoring and Reporting Program No. R5-2002-0098 (RMRP) for ConAgra Grocery Products Company (ConAgra), Oakdale Facility. The enclosed is issued pursuant to California Water Code §13267.

If you have questions regarding the enclosed, please contact Alexis R. Phillips-Dowell at (559) 445-5500.

JO ANNE KIPPS
Senior Engineer
RCE No. 49278

Enclosure: Revised Monitoring and Reporting Program No. R5-2002-0098

cc: Mr. Denise Wood, Stanislaus County Environmental Resources Department, Modesto
Mr. Ron Freitas, Stanislaus County Planning and Development Department, Modesto
Mr. Mike Luevano, Stanislaus County Public Works Department, Modesto
Mr. Robert Bowcock, Integrated Resource Management, LLC, Claremont
Mr. John Brichetto, Oakdale
Mr. Michael C. Normoyle, Esquire, Modesto
Mr. Jordan Smith, Brown and Caldwell, Rancho Cordova
Interested Parties (next page)

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N15 / STANISLAUS CO / A / CON AGRA GROCERY PRODUCTS CO / OAKDALE FACILITY / 5B50NC00011

Interested parties:

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2002-0098

FOR
CONAGRA GROCERY PRODUCTS COMPANY
KEN VAN DYKE, MARCUS HANEY, JILL KAUFMAN-CONNOLLY
AND JOHN BRICHETTO
CONAGRA OAKDALE FACILITY
STANISLAUS COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code section 13267. The Discharger shall submit within **30 days** following issuance of this revised MRP a flow schematic identifying sample locations specified in this revised MRP and a map showing groundwater, soil-pore liquid monitoring locations, and surface water sampling stations.

The Discharger shall not implement any changes to this MRP unless and until the Regional Board adopts or the Executive Officer issues a revised MRP. Changes to sample locations shall be established with concurrence of Regional Board's staff, and a description of the revised stations shall be submitted to the Regional Board and, following approval of the Executive Officer, attached by the Discharger to its copy of this Order. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with Standard Provisions, Provisions for Monitoring. The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:

1. the operator is trained in the proper use of the instrument;
2. the instruments are calibrated prior to each use;
3. instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. field calibration reports are submitted as described in the "Reporting" section of this MRP.

Each laboratory report shall clearly identify the following:

1. analytical method;
2. measured value;
3. units;
4. what constituent a value is reported as;
5. method detection limit (MDL);
6. reporting limit (RL) (i.e., a practical quantitation limit or PQL); and
7. documentation of cation/anion balance for general minerals analysis of supply water and groundwater samples.

All laboratory results shall be reported down to the MDL. Non-detected results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods shall be flagged as estimated.

Analytical procedures shall comply with the methods and holding times specified in: *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, 1983); *Methods for Determination of Inorganic Substance in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and Wastewater, 20th Edition* (WEF, APHA, AWWA); and *Soil, Plant and Water Reference Methods for the Western Region, 2003,* 2nd Edition, 2003 (hereafter Western Region Methods).

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least the first 12 months of monitoring, the Discharger may request the Revised MRP be revised further to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

FLOW MONITORING

To monitor compliance with the flow limits of the WDRs, the Discharger shall monitor flows from the following ponds:

Flow Source	Units	Type	Frequency
Ranch Pond			
Daily Flow	mgd	Continuous	Daily
Monthly Average Daily Flow	mgd	Calculated	Monthly
Settling Pond			
Daily Flow	mgd	Continuous	Daily
Monthly Average Daily Flow	mgd	Calculated	Monthly
Amaral Pond			
Daily Flow	mgd	Continuous	Daily
Monthly Average Daily Flow	mgd	Calculated	Monthly
Total flow to land application areas			
Daily Flow	mgd	Continuous	Daily
Monthly Average Daily Flow	mgd	Calculated	Monthly[1]

[1] To determine compliance with Discharge Specification B.2.a and B.2.b, report October monthly average daily flow separately for the first and second halves of the month (i.e., for the 1st half, divide by 15 the cumulative daily flow from 1 to 15 October).

AERATED POND AND RANCH POND INFLUENT MONITORING

Influent samples shall be collected after screening and prior to discharge to the Aerated Pond or Ranch Pond. The Discharger shall monitor the influent as follows:

Constituent/Parameter	Units	Type	Frequency
pH	pH units	Grab	Weekly
Settleable Solids	ml/L	Grab	Weekly
Conductivity at 25°C (EC)	µmhos/cm	24-hr composite	Weekly
5-day, 20°C Biochemical Oxygen Demand (BOD_5)	mg/L	24-hr composite	Weekly
Chemical Oxygen Demand (COD)	mg/L	24-hr composite	Weekly
Nitrate (as NO_3-N)	mg/L	24-hr composite	Weekly
Total Kjeldahl Nitrogen (TKN)	mg/L	24-hr composite	Weekly
Total Nitrogen	mg/L	Calculated	Weekly
Total Coliform Organisms (TCO)	MPN[1]/100 mL	Grab	Weekly[2]
Fecal Coliform	MPN/100 mL	Grab	Weekly[2]
Fecal Streptococcus	MPN/100 mL	Grab	Weekly[2]

[1] Most probable number
[2] After two months sampling, frequency may be reduced to quarterly (i.e., January, April, July, and October) upon Executive Officer written approval.

SETTLING POND AND AMARAL POND DISCHARGE MONITORING

Samples of the discharge from the Settling Pond and from the Amaral Pond shall be collected at a point downstream of the inlet to the discharge pipeline that directs flow to the land application areas. At a minimum, the Discharger shall monitor the Settling Pond and Amaral Pond discharge as follows:

Constituent/Parameter	Units	Type	Frequency
pH of wastewater	pH units	Grab	Daily
pH of wastewater blended with irrigation water prior to land discharge	pH units	Grab	Daily
EC	µmhos/cm	Grab	Daily[1]
Settleable Solids	ml/L	Grab	Weekly
Total Suspended Solids	mg/L	Grab	Weekly
BOD_5	mg/L	Grab	Weekly
COD	mg/L	Grab	Weekly[2]

Constituent/Parameter	Units	Type	Frequency
TDS[3]	mg/L	Grab	Weekly[2]
Nitrate (as NO_3-N)	mg/L	Grab	Weekly[2]
TKN	mg/L	Grab	Weekly[2]
Total Nitrogen	mg/L	Calculated	Weekly[2]
Total Organic Carbon (TOC)	mg/L	Grab	Monthly[2]
Total Acidity (as $CaCO_3$)	mg/L	Grab	Monthly[2]
General Minerals[4]	mg/L	Grab	Monthly[2]
SAR[5]	None	Calculated	Quarterly[2,6]
Metals[7]	mg/L	Grab	Quarterly[2, 6, 8]

1 May be reduced to weekly concurrent with BOD_5 sampling after two months of daily monitoring.

2 Concurrent with BOD_5 sampling

3 TDS, as used in this MRP, shall be determined using EPA Test Method No. 160.1 for combined organic and inorganic TDS and EPA Method No. 160.4 for inorganic TDS.

4 General Minerals, as used in this MRP, shall consist of the constituents list in the General Minerals Analyte List below.

5 Sodium adsorption ratio (SAR), as used in this MRP, shall be derived by $\frac{Na}{\sqrt{\frac{Ca+Mg}{2}}}$, where Na, Ca, and Mg are in meq/L.

6 Quarterly, as used in this MRP, shall indicate sampling is to occur in January, April, July, and October

7 Metals, as used in this MRP, shall consist of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

8 May be reduced to annually (October) after two years of quarterly sampling subject to Executive Officer written approval.

General Minerals Analyte List

Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Manganese
Aluminum	Chloride	Phosphorus, total
Bicarbonate (as $CaCO_3$)	Hardness (as $CaCO_3$)	Potassium
Boron	Iron	Sodium
Calcium	Magnesium	Sulfate

General Minerals Sample Collection and Preservation: With the exception of wastewater samples, samples placed in an acid-preserved bottle must first be filtered through a 0.45 µm nominal pore size filter. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

GENERAL POND MONITORING

The Flume Water Recycling Pond (until decommissioned), Aerated Pond, Ranch Pond, Settling Pond, Tailwater Ponds A and B, Brichetto Lagoon, and Amaral Pond shall be monitored as follows:

Constituent/Parameter	Units	Type	Frequency
Dissolved Oxygen (DO)	mg/L	Grab[1]	Weekly
Freeboard	0.1 feet	Measurement	Weekly
Odors	--	Observation	Weekly
Berm/levee condition	--	Observation	Monthly

[1] Samples shall be collected between 0700 and 0900 hours from each pond in use at a depth of one foot below the water surface in a location opposite the inlet.

LAND APPLICATION AREA MONITORING

A. Daily Pre-Application Inspections

Land application areas shall be inspected prior to wastewater applications, and observations from those inspections shall be summarized for inclusion in the monthly monitoring reports. The following items shall be noted in daily pre-application inspections:

1. Evidence of erosion;
2. Berm condition;
3. Condition of each drop box and flow control structure valve;
4. Proper use of valves (i.e., check that all affected valves are closed or open, as required);
5. Soil saturation;
6. Ponding;
7. Potential runoff to off-site areas;
8. Potential and actual discharge to surface water;
9. Accumulation of organic solids;
10. Soil clogging;
11. Odors that have the potential to be objectionable at or beyond the property boundary; and
12. Insects.

Temperature; wind direction and approximate speed; and other relevant field conditions shall be also be observed and recorded. The notations shall also document any corrective actions taken based on documented observations. A **brief summary** of observations documented and corrective actions taken during each month shall be submitted monthly.

B. Routine Monitoring

The Discharger shall perform the following routine monitoring and loading calculations for each discrete subarea (i.e., those identified in previously monitoring reports as A1 through A9, SB1 through SB12, NB1 through NB9, M1 through M3):

Constituent/Parameter	Units	Type	Frequency
Precipitation	inches[1]	Rain gauge	Daily
Source of wastewater[2]	--	--	Daily
For each discrete subarea			
Wastewater application area	acres	N/A	Daily
Wastewater loading	mgd	Continuous	Daily
Wastewater loading	inches/day	Calculated	Daily
Supplemental irrigation flow	mgd	Estimated	Daily
Supplemental irrigation flow	inches/day	Estimated	Daily
Total hydraulic loading rate [3]	inches	Estimated	Daily
Average livestock density	AU [4] /acre	Observation	Daily
Daily nitrogen loading rates			
from wastewater [5]	lbs/acre/day	Calculated	Daily
Monthly nitrogen loading rates			
from wastewater	lbs/acre/month	Calculated	Monthly
from cattle	lbs/acre/month	Calculated	Monthly
from fertilizers	lbs/acre/month	Calculated	Monthly
total nitrogen loading	lbs/acre/month	Calculated	Monthly
Cumulative Annual nitrogen loading rate	lbs/acre/year [6]	Calculated	Monthly
BOD_5 loading rate [7]			
on application day [8]	lbs/acre/day	Calculated	Daily
averaged over application cycle [9]	lbs/acre/day	Calculated	Daily
Inorganic TDS loading rates [10]	lbs/acre/month	Calculated	Monthly

1 Report to the nearest 0.1 inch.
2 Identify source as Ranch Pond, Settling Pond, Amaral Pond, or applicable combination thereof.
3 Include total liquid application (i.e., precipitation, wastewater, and irrigation water).
4 Animal units
5 Wastewater nitrogen loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of wastewater total nitrogen.
6 Starting as zero each January 1

[7] BOD_5 loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of wastewater BOD_5.

[8] Application day, as referred to in this MRP, shall be defined as a 24-hour period.

[9] Application cycle, as referred to in this MRP, shall be defined as the period (in days) of wastewater application followed by resting interval until next wastewater application.

[10] Inorganic TDS loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average of the three most recent results of wastewater inorganic TDS.

VADOSE ZONE MONITORING – SOILS

The Discharger shall establish permanent representative soil monitoring locations within the land application areas as follows: three background locations outside of the land application areas, at least six locations within the Northern Area, and at least twelve locations within the Southern Area. Sampling locations shall be distributed to be representative of each subarea and predominant soil type. At least one soil sampling location shall be near each lysimeter.

The following table recommends the number of subsamples to collect per specified collection depth interval to yield representative composite samples of soil in subject sampling areas:

Subject Sampling Subarea (acres)	Recommended Number of Samples
< 5	15
5 – 10	18
10 – 25	20
25 – 50	25
> 50	30

At least **60 days** prior to collecting soil samples as specified by this Revised MRP, the Discharger shall submit a technical report describing a Soil Sampling Work Plan. The Work Plan shall indicate the type of the proposed sample (e.g., intuitive, systematic, random, or some combination thereof) and describe the rationale for sample type selection in sufficient detail to facilitate Regional Board staff's concurrence with the proposed number and location of soil samples. To this end, the Work Plan shall include a map of sufficient detail depicting the proposed soil sample locations, relevant features of the subject discharge regulated by waste discharge requirements (e.g., wastewater ponds, effluent storage ponds, sludge stockpile areas), and land use in the immediate vicinity in general and in particular in the area(s) of proposed background soil sample location(s). Should the Discharger request to collect fewer subsamples than that indicated in the above table, the Work Plan shall provide sufficient technical justification that the reduced sample size will constitute a representative sample of soils within the subject soil sampling area.

Soil samples shall be collected from each sampling location at the following depth intervals: Samples shall be collected at 0-1 feet, 3-4 feet, and 6-7 feet, 8-9 feet, or alternative depth intervals in concurrence with Regional Board staff. Subsequent to the first soil sampling event conducted pursuant to this revised MRP, the Discharger may present technical justification for alternative depth intervals. Each

depth-discrete sample of similar soil type and discharge history shall be thoroughly mixed to create a composite sample representative of the depth interval, and analyzed as follows:

Constituent/Parameter	Units	Sample	Frequency
Soil Classification (USDA NRCS [1])	--	--	Once
Soil Texture [2]	--	9 feet [3]	Once
Soil Color	Munsell notation	9 feet [3]	
Cation Exchange Capacity[4]	meq/100 g	9 feet [3]	Once / 3 Years[5]
Moisture Content	%	9 feet [3]	Annually[6]
Total Organic Carbon[7]	% dry weight	9 feet [3]	Annually[6]
Carbonate [8]	% dry weight	9 feet [3]	Annually[6]
Soil Buffer pH, Lime requirement [9]	pH units & tons of 100% $CaCO_3$ per acre	9 feet [3]	Annually[6]
Saturation Paste Extract Analyses			
pH [10]	pH units	9 feet [3]	Annually[6]
Soluble Salts – EC [11]	µmhos/cm	9 feet [3]	Annually[6]
TDS	mg/L	9 feet [3]	Annually[6]
Chloride [12]	meq/L	9 feet [3]	Annually[6]
Calcium [13]	mg/L	9 feet [3]	Annually[6]
Magnesium [13]	mg/L	9 feet [3]	Annually[6]
Sodium [13]	mg/L	9 feet [3]	Annually[6]
Sodium Adsorption Ratio (SAR) [13]	unitless	9 feet [3]	Annually[6]
Soil Nutrients			Annually[6]
Kjeldahl Nitrogen [14]	%	9 feet [3]	Annually[6]
Nitrate Nitrogen [15]	mg/kg	9 feet [3]	Annually[6]
Ammonium Nitrogen [16]	mg/kg	9 feet [3]	Annually[6]
Available Phosphorus [17]	mg/kg	9 feet [3]	Annually[6]
Extractable Potassium[18]	mg/kg	9 feet [3]	Annually[6]
Soil Micronutrients – DTPA Extractable Method [19]			
Zinc	mg/kg	9 feet [3]	Annually[6]
Manganese	mg/kg	9 feet [3]	Annually[6]
Iron	mg/kg	9 feet [3]	Annually[6]

Footnotes on following page

[1] United States Department of Agriculture, Natural Resources Conservation Service

[2] USDA terminology (i.e., use of textural triangle to show the percentages of clay, silt, and sand in the textural triangle) or acceptable substitute

[3] Samples shall be collected at 0-1 feet, 3-4 feet, and 6-7 feet, 8-9 feet, or alternative depth intervals in concurrence with Regional Board staff.

[4] Western Region Method S-10.10, S-10.20 (CEC) or acceptable substitute

[5] The initial monitoring for CEC shall be performed in October 2003.

[6] October

[7] Western Region Method S-9.30 (TOC) or acceptable substitute

[8] Western Region Method S-13.10 (Carbonate) or acceptable substitute

[9] Western Region Methods S-2.50, S-2.61, S-2.70, or S-2.80, or acceptable substitute

[10] Western Region Method S-1.10 (pH) or acceptable substitute

[11] Western Region Method S-1.20 (EC) or acceptable substitute

[12] Western Region Method S-1.40 (Chloride) or acceptable substitute

[13] Western Region Method S-1.60 (Calcium, Magnesium, Sodium, and SAR – Atomic Absorption Method or Inductively coupled plasma emission spectrometry) or acceptable substitute.

[14] Western Region Method S-8.10 (Soil Kjeldahl Nitrogen), Western Region Method P-2.20 (Plant Kjeldahl Nitrogen), Western Region Method S-9.30, or acceptable substitute

[15] Western Region Method S-3.10 (Nitrate Nitrogen) or acceptable substitute

[16] Western Region Method S-3.50 (Ammonium Nitrogen) or acceptable substitute

[17] Select among one of several methods for available phosphorus in Western Region Method (S-4.20, S-4.31, S-4.33, S-4.40, S-4.50), or an acceptable substitute

[18] Western Region Method S-5.10 (Extractable Potassium) or acceptable substitute

[19] Western Region Method S-6.10 (DTPA Extraction) or acceptable substitute.

VADOSE ZONE MONITORING – SOIL-PORE LIQUID

The Discharger shall install a vadose zone monitoring system within the Brichetto North and Van Dyke B subareas. The monitoring system shall consist of pan lysimeters at each sampling location. The lysimeters shall be designed to collect grab samples of soil pore liquid or infiltrate at a depth of five feet below ground surface or immediately above the area's hard pan layer, whichever is shallower. For each subarea designated above, a minimum of two lysimeters shall be installed at locations designed to represent a "worst case" scenario (e.g., in locations that tend to infiltrate faster or those potentially subject to tailwater ponding). The lysimeters shall be designed to provide sufficient sample volume to perform the analytical testing program specified below, and shall be sampled promptly following the passage of the major wetting front (as determined by data collected from soil moisture probes), and completely purged after each sampling event. Soil-pore liquid shall be collected from pan lysimeters using airtight containers.

As described in the Provisions section of this Order, the Discharger shall propose the type and locations, as well as methods to be used to purge and sample the lysimeters. These techniques shall be implemented upon approval of the Executive Officer. Lysimeter samples shall be analyzed using standard EPA methods as follows:

Method	Constituent[1]	Units	Minimum Sample (mL)[2]	Frequency
	Water Depth[3]	inches		Monthly[4]
	pH	pH units	5	Monthly[4]
	EC	µmhos/cm	10	Monthly[4]
EPA 351.3[5]	TKN	mg/L	20	Monthly[4]
EPA 300.0	Nitrate (as N)	mg/L	20	Monthly[4]
	Phosphorus	mg/L		Monthly[4]
	Sulfate	mg/L		Monthly[4]
	Chloride	mg/L		Monthly[4]
EPA 200.7	Calcium	mg/L	5	Monthly[4]
	Iron	mg/L		Monthly[4]
	Magnesium	mg/L		Monthly[4]
	Manganese	mg/L		Monthly[4]
	Potassium	mg/L		Monthly[4]
EPA 310.1	Alkalinity[5]	mg/L	20	Monthly[4]
EPA 415.1	TOC	mg/L	150	Monthly[4]
EPA 160.1	TDS	mg/L	100	Monthly[4]
EPA 160.4	Fixed TDS	mg/L	100	Monthly[4]

1 If lysimeters cannot yield a sufficient sample volume for all the above constituents, the collected volume shall be reported and samples analyzed for the constituents in the order listed above.

2 Minimum sample volume required for each specified test method. Absence of minimum sample volume indicates that the sample size specified for each EPA method is used to analyze all the constituents covered under that method (e.g., EPA 300.0, sample size 20 mL can be used to analyze for nitrate, phosphorus, sulfate, and chloride, etc.).

3 A summary of the data collected from the rain gauge installed in the lysimeter sample container (as described in the *Vadose Monitoring Completion Report*, dated 15 Septembers 2003) shall be reported monthly.

4 All lysimeters shall be sampled at least monthly unless there is less than 1 inch of percolate in the sample container. If the percolate is less than 1 inch each month, sampling may be conducted quarterly thereafter. Any reduction in lysimeter sample collection frequency will be subject to Executive Officer written approval.

5 Or EPA method 4500N-org

6 Total Alkalinity

GROUNDWATER MONITORING

Prior to collecting samples and after measuring the water level, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

In reporting the results of the first sampling event performed pursuant to this Revised MRP, the Discharger shall include a detailed description of the procedures and techniques for: (a) sample collection, including purging techniques, purge volumes, sampling equipment, and decontamination of sampling equipment; (b) sample preservation and shipment; (c) analytical procedures; and (d) chain of custody control. The Discharger shall report when it deviates from these procedures and techniques. Samples shall be collected from approved monitoring wells and analyzed for the following constituents/parameters at the following frequency:

Constituent/Parameter	Units	Type	Frequency
Depth to groundwater	To 0.01 foot (hundredths)	Measured	Quarterly
Groundwater elevation	Above mean sea level, to 0.01 foot	Calculated	Quarterly
pH	pH Units	Grab	Quarterly
Chemical Oxygen Demand	mg/L	Grab	Quarterly
TCO	MPN/100 mL	Grab	Quarterly
Fecal Coliform	MPN/100 mL	Grab	Quarterly
Fecal Streptococcus	MPN/100 mL	Grab	Quarterly
TOC	mg/L	Grab	Quarterly
Ammonia (as NH_3-N)	mg/L	Grab	Quarterly
Nitrate (as NO_3-N)	mg/L	Grab	Quarterly
TKN	mg/L	Grab	Quarterly
Total Nitrogen	mg/L	Calculated	Quarterly
EC	µmhos/cm	Grab	Quarterly
TDS	mg/L	Grab	Quarterly
SAR	None	Calculated	Quarterly
Phosphorus, Total	mg/L	Grab	Quarterly
General Minerals	mg/L	Grab	Quarterly
Metals	µg/L	Grab	Quarterly

SOLIDS MONITORING

The amount and type of solid waste generated each month from screening operations shall be reported. The name and contact information of the recipient and ultimate disposition of solids shall be identified.

SURFACE WATER MONITORING

The Discharger shall establish at least six permanent surface water sampling stations along the Van Dyke, Bancroft, and Cavill Drains as follows:

1. SW-1 shall be in the Cavill Drain upstream of the Kaufman-Connolly subarea (on the east side of the eastern property boundary);
2. SW-2 shall be in the Van Dyke Drain upstream of Tailwater Pond A;
3. SW-3 shall be approximately 10 feet downstream of the confluence of the Van Dyke and Cavill Drains (on the west side of the Van Dyke property boundary). If the landowner refuses access to the site, the sampling site may be relocated to the nearest upstream point on the Cavill Drain that is on public property or on land owned by the Discharger.
4. SW-4 shall be in the Cavill drain immediately upstream of the Southern Area (on the north side of the Amaral property boundary);
5. SW-5 shall be in the Bancroft Drain immediately upstream of the flow control structure; and
6. SW-6 shall be in the Cavill Drain immediately downstream of the Southern Area (on the west side of the Brichetto property boundary).

Surface water samples shall be collected and analyzed using standard EPA methods. Surface water monitoring shall include, at a minimum, the following:

Constituent/Parameter	Units	Type	Frequency [1,2,3]
pH	pH units	Grab	Weekly
EC (General)	µmhos/cm	Grab	Weekly[4]
EC (at SW-1 and SW-6)			
Daily Maximum EC	µmhos/cm	Grab	Daily[5]
Daily Average EC	µmhos/cm	Grab	Daily[5]
Temperature	° C	Grab	Monthly
BOD_5	mg/L	Grab	Monthly
DO	mg/L	Grab	Monthly
Phosphorus, Total	mg/L	Grab	Monthly
TDS	mg/L	Grab	Monthly
Ammonia (as NH_3-N)	mg/L	Grab	Monthly[6]

Constituent/Parameter	Units	Type	Frequency [1, 2,3]
Nitrate (as NO_3-N)	mg/L	Grab	Monthly[6]
TKN	mg/L	Grab	Monthly[6]
Total Nitrogen	mg/L	Calculated	Monthly[6]
General Minerals	mg/L	Grab	Quarterly

1 If results of monitoring indicate that the discharge appears to violate Discharge Prohibitions A.4 and A.5, and Land Application Area Specification C. 2, but monitoring frequency is not sufficient to validate violation, the sampling frequency shall be increased to confirm the magnitude and duration of violation.

2 During the primary irrigation season (June through October), sampling shall be coordinated with irrigation to allow sampling on a day when tailwater is present in the Van Dyke and Bancroft Drains. During the rainy season (November through May), sampling shall be coordinated with precipitation to allow sampling of storm water runoff.

3 Samples from the Northern Area (SW-1, SW-2, and SW-3) shall be taken on the same day. Samples from the Southern Area (SW-4, SW-5, and SW-6) shall also be taken on the same day, but need not be taken on the same day as samples from the Northern Area, except during storm water runoff events, when all samples shall be taken on the same day.

4 Concurrent with pH and temperature monitoring

5 Implement within 60 days following written request from the Executive Officer to implement continuous EC monitoring (see below).

In reporting the results of surface water monitoring, the Discharger shall include a description of (a) site conditions (e.g., when the last significant precipitation event occurred prior to sampling, the number of hours or days of the wastewater application near the surface water monitoring station, etc.) and (b) valve configuration (i.e., note which valves are open, which are closed, and when the valves were opened or closed relative to the surface water monitoring event).

Evidence that discharge is affecting surface water quality downstream of the land application area includes significant differences surface water EC at SW-1 and SW-6. Continuous EC monitoring may be necessary to evaluate the extent to which the discharge is indirectly impacting surface waters by the unauthorized release of pollutants to waters of the United States (e.g., through leaky control valves). To investigate whether the discharge is adversely affecting surface water quality, the Executive Officer may request in writing the Discharger install continuous EC monitoring devices at SW-1 and SW-6.

SOURCE WATER MONITORING

The Discharger's facility supply water and irrigation supply (if different from facility supply) shall be monitored for the following:

Constituent	Units	Frequency
EC	µmhos/cm	Monthly for 4 months, then Yearly[1]
TDS	mg/L	Monthly for 4 months, then Yearly[1]
General Minerals	mg/L	Yearly[1]

1 October, concurrent with EC sampling

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, soil, groundwater), sampling location, and the reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e., the January report is due by 1 March). At a minimum, monthly monitoring reports shall include for the reporting period:

1. Tabular summaries of all monitoring data required by this MRP collected during the month organized in a manner that reflects above tables of requested data (i.e., Flow Monitoring, Aerated Pond and Ranch Pond Influent Monitoring, Settling Pond and Amaral Pond Effluent Monitoring, General Pond Monitoring, etc.).

2. A summary of observations documented as part of daily pre-application inspections and a discussion of corrective actions taken and their effectiveness.

3. Tabular summaries for data collected from Routine Monitoring.

    i. starting and ending dates of irrigation,

    ii. hydraulic loadings (in/month),

    iii. BOD_5 loading (on application day and averaged over application cycle

    iv. nitrogen loading from wastewater (lbs/acre/month),

    v. nitrogen loadings from fertilizer and cattle grazing (lbs/acre/month),

    vi. yearly cumulative nitrogen loading (lbs/acre/month) from all sources of nitrogen (starting in January).

4. A summary of observations documented and corrective actions taken during each month shall be submitted monthly (daily pre-application subarea inspections).

5. A discussion that compares monitoring data to applicable discharge specifications and an explanation of any violation of those specifications.

6. When requested by staff, copies of laboratory analytical report(s).

7. Tabular summaries of hydraulic loading rate (inches/acre/month) for each subarea receiving wastewater applications during the month, with supporting data showing how the rate was determined.

8. Total nitrogen loading rates (lbs/acre/month) for each subarea calculated on monthly basis using the daily applied volume of wastewater, estimated daily application area, and the most recent results of total nitrogen, which shall also be reported along with supporting calculations.

9. Nitrogen loading rates from other sources (i.e., fertilizers and cattle) for each subarea calculated on a monthly basis using the daily applied load and the estimated daily application area.

10. Cumulative nitrogen loading rates for each subarea for the calendar year calculated as a running total of monthly loadings to date from wastewater, supplemental fertilizers, and livestock.

11. All analytical data obtained during the month from monitoring soil, soil-pore liquid, and groundwater presented in electronic format (e.g., Excel spreadsheet) selected in concurrence with Regional Board staff.

12. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned that may be needed to comply with the WDRs.

B. Annual Land Treatment Assessment Report

Separate technical reports assessing the effectiveness of land treatment for wastewater disposal shall be submitted annually to the Regional Board by **1 February**. Annual land treatment assessment reports shall be prepared under the direction of and certified by a California registered civil engineer, geologist, or hydrogeologist, and include the following:

1. A scaled map showing features currently relevant to the discharge: facility wastewater treatment and storage ponds and sumps, land application areas, irrigation check boundaries, and the locations of groundwater, vadose zone, and surface water monitoring stations.

2. A comprehensive summary of the past year's discharge management practices including, but not limited to, hydraulic and waste constituent loadings, drying intervals, animal grazing practices, and cropping practices.

3. A comprehensive evaluation of the effectiveness of the past year's discharge operation to preclude or minimize the generation of nuisance conditions. This discussion shall, at a minimum, include a summary of all instances of odor and/or vector nuisance conditions known to have occurred during the previous year and a description of the corrective measures implemented to abate these conditions.

4. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for groundwater and vadose zone monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting

Requirements. The narrative shall be supported by representative field logs documenting sampling protocols (e.g., depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged).

5. A description of groundwater flow and gradient in the vicinity of the facility and wastewater storage and discharge areas. The description shall be supported by graphical depictions of groundwater elevation data presented in a format selected in concurrence with Regional Board staff. These graphics shall include:

    a. hydrographs showing groundwater elevation in approved wells for at least the previous five years or to the extent that such data are available, whichever is fewer. The hydrographs should show groundwater elevation with respect to the elevations of the top and bottom of the screened interval and be presented at a scale of values appropriate to show trends or variations in groundwater elevation.

    b. contour maps of groundwater depth and elevation for each groundwater monitoring event conducted during the reporting period.

6. A characterization of background groundwater quality for monitored constituents or technical justification why available data is insufficient to characterize background groundwater quality for specified constituents (include a proposal for obtaining the requisite data).

7. A characterization of groundwater influenced by the discharge (i.e., groundwater flowing under the facility and wastewater storage and application areas). The characterization shall be supported by graphical depictions of groundwater quality data for, at a minimum, the following waste constituents (and their decomposition byproducts): COD, fixed TDS, chloride, hardness, alkalinity, nitrate, total nitrogen, and iron and manganese (i.e., Fe + Mn). The graphics shall be presented in a format selected in concurrence with Regional Board staff. These graphics shall include:

    a. concentration graphs for each well for the above cited constituents for at least the previous five years or to the extent that such data are available, whichever is fewer.

    b. concentration contours of the above cited constituents for each groundwater monitoring event conducted during the reporting period.

8. A discussion of groundwater and vadose zone monitoring data that shall, at a minimum, include:

    a. The evaluation for the reporting period of spatial or temporal trends in the data in relation to land treatment system design, operation, and maintenance. This shall be supported by:

        i. Tabular summaries of monthly total loading rates to distinct discharge subareas (in million gallons and inches) for wastewater, rainfall, and irrigation water, and total applied water.

ii. Tabular summaries of the estimated volume of water percolating to groundwater from distinct discharge subareas (include mass balance documentation for supporting assumptions and calculations).

iii. Tabular summaries of monthly (and yearly total) loadings to distinct discharge subareas for, at a minimum, BOD_5, COD, total nitrogen, chloride, and fixed TDS.

iv. An estimate of the amount of applied nitrogen and fixed TDS (in lbs/acre) removed from the soil in distinct discharge subareas as a result of crop harvest (include supporting documentation).

b. An assessment of land treatment performance, including evaluations of the

i. adequacy of the soil and soil-pore liquid monitoring program to provide an assessment of treatment performance and early detection of potential groundwater quality degradation;

ii. effectiveness of land treatment for removing waste constituents;

iii. discharge's potential for releasing untreated waste constituents and decomposition byproducts to groundwater in concentrations that may cause exceedances of groundwater limitations or water quality objectives, as designated in *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*; and

iv. measures that may be implemented to reduce the release to groundwater of untreated waste constituents and decomposition byproducts.

9. A technical evaluation of the extent to which, if any, the discharge, in combination with other sources, has caused groundwater to contain monitored waste constituents in concentrations statistically greater than background water quality. Statistical methods employed in this evaluation shall be selected in concurrence with Regional Board staff.

10. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

11. When requested by staff, copies of laboratory analytical report(s) for groundwater, soil-pore liquid, and soil monitoring.

12. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.

C. Annual Report

An Annual Report shall be submitted to the Regional Board by **1 February** of each year. The Annual Report shall include the following:

1. The names and telephone numbers of persons to contact regarding the facility's land discharge for emergency and routine situations.

2. A certified statement of when the flow meter and other monitoring instruments and devices (e.g., hand held pH meters) were last calibrated, including identification of who did the calibration (Standard Provision C.4).

3. A narrative description of solids disposal practices, including the name and contact information for each disposal facility and the quantity disposed at each facility.

4. For each land application subarea identified in the WDRs, submit the following information regarding the current landowner agreement: date of execution, date of expiration, signatory parties, names and phone numbers of persons responsible for managing irrigation and discharge controls at the property.

5. For each on-site residence where wastewater is applied with 50 feet of any occupied structure, provide letters from the property owner and occupant (if not owner-occupied) stating that the current setbacks are acceptable. If there has been no change in occupancy or ownership since the previous annual report, the Discharger shall so state, but need not re-submit the letters.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

The Discharger shall implement the above monitoring and reporting program in the **first month** following issuance of the revised MRP.

Ordered by:_____
THOMAS R. PINKOS, Executive Officer

_____
(Date)

Revised: **16 DECEMBER 2003**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS FOR WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this Order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;

   d. A material change in the character, location, or volume of discharge.

4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:

   a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.

   b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.

   c. The addition of a major industrial, municipal or domestic waste discharge facility.

   d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:

    a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,

    b. Copy any records required to be kept under terms and conditions of this Order,

    c. Inspect at reasonable hours, monitoring equipment required by this Order, and

    d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.

9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.

11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.

12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written

notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

   This plan shall:

   a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.

   b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.

   c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

   The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:

   a. <u>For a corporation</u>: by a principal executive officer of at least the level of senior vice-president.

   b. <u>For a partnership or sole proprietorship</u>: by a general partner or the proprietor.

   c. <u>For a municipality, state, federal or other public agency</u>: by either a principal executive officer or ranking elected or appointed official.

   d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;

      (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;

      (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

      (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.

5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

   California Regional Water Quality Control Board
   Central Valley Region
   11020 Sun Center Drive, #200
   Rancho Cordova, CA 95670-6114

   or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).

2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

   Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of three

years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

a. the date, exact place, and time of sampling or measurements,
b. the individual(s) who performed the sampling of the measurements,
c. the date(s) analyses were performed,
d. the individual(s) who performed the analyses,
e. the laboratory which performed the analysis,
f. the analytical techniques or methods used, and
g. the results of such analyses.

4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.

5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.

6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:

   a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.

   b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.

4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.

2. By-pass (the international diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:

   a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and

      (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or

   b. (1) by-pass is required for essential maintenance to assure efficient operation; and

      (2) neither effluent nor receiving water limitations are exceeded; and

      (3) the discharger notifies the Board ten days in advance.

   The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

a. an upset occurred and the cause(s) can be identified;

b. the permitted facility was being properly operated at the time of the upset;

c. the discharger submitted notice of the upset as required in paragraph B.1. above; and

d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.

5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

6. Definitions

   a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

   b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

      Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

   c. The monthly average concentration is the arithmetic mean of measurements made during the month.

   d. The "daily maximum" **discharge** is the total discharge by volume during any day.

e. The "daily maximum" **concentration** is the highest measurement made on any single discrete sample or composite sample.

f. A "grab" sample is any sample collected in less than 15 minutes.

g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;

(1) at equal time intervals, with a maximum interval of one hour

(2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the inddustrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent that the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:

(1) Complied with baseline monitoring report requirements (where applicable);

(2) Consistently achieved compliance;

(3) Inconsistently achieved compliance;

(4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);

(5) Complied with schedule to achieve compliance (include the date final compliance is required);

(6) Did not achieve compliance and not on a compliance schedule;

(7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

(1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;

(2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

(5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;

(6) Restriction of flow to the treatment plant; or

(7) Disconnection from discharge to the treatment plant.

g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.

h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

i. A summary of public participation activities to involve and inform the public.

j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator

U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers